THE STANDARD IN PV MOUNTING STRUCTURES™

SolarMount®

MASTER PRICE LIST

with SIZING CHARTS

effective March 1, 2007

SolarMount® is the most versatile system of components available for mounting PV modules. Its wide variety of options ensure a structurally sound and aesthetically pleasing installation for almost any framed PV module.

U.S. Des. Patent No. D496,248S. Other patents pending.

Design Tools

Our SolarMount Estimator generates quotes on the spot. Use it to weigh any number of options and configurations.

www.unirac.com

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UniRac welcomes input concerning the accuracy and user-friendliness of this publication. Please write to **publications@unirac.com.**

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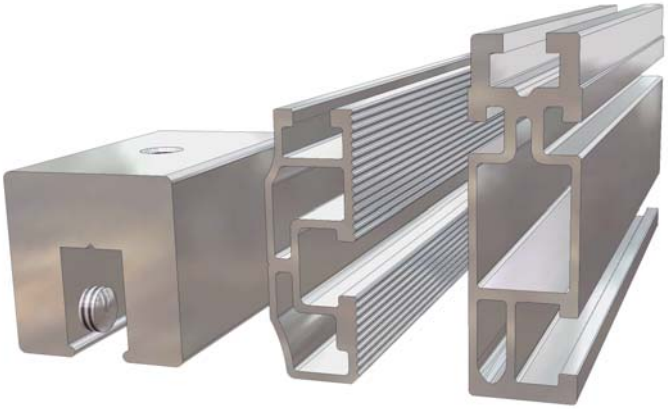
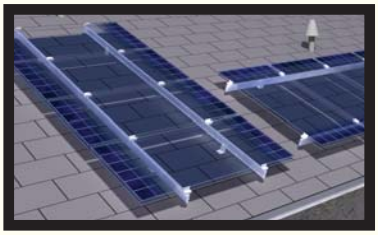
March 2007

Components and Configurations

Thanks for using SolarMount®! Select the configuration checklist best suited for your installation.

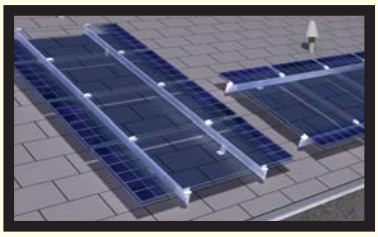


SolarMount S-5! **SolarMount Light Rail** **SolarMount Standard Rail**



LIGHT RAIL, FLUSH MOUNT

Easy handling light rail saves aluminum and expense without compromising structural integrity. Install an array flush to a roof or other mounting surface with footings up to 48 inches apart. Mount in high profile (rails parallel to rafters) or low. Accessories handle special circumstances, such as Spanish tile or an uneven roof.



STANDARD RAIL, FLUSH MOUNT

Where foot spacing must exceed 48 inches, standard rail provides the extra strength. Install an array flush to a roof or other mounting surface in high profile (rails parallel to rafters) or low. Accessories handle special circumstances, such as Spanish tile or an uneven roof.

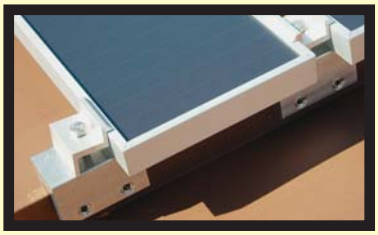
STANDARD RAIL, LOW PROFILE TILT LEGS

Minimize the vertical height of your array—to hide an array behind a parapet, for example. You can also optimize tilt angle on a pitched roof to maximize system performance. Tilt angle depends on leg length and the make and model of your PV modules. Use standard rail with all tilt legs.

STANDARD RAIL, HIGH PROFILE TILT LEGS

Maximize module density at a given site area on the ground or on a flat or pitched roof. Tilt angle depends on leg length and rail length. Use standard rail with all tilt legs.

High profile legs require unspliced rails not exceeding 180 inches.



S-5 STANDING-SEAM METAL ROOF CLAMPS

SolarMount/S-5! secure PV modules to a standing-seam metal roof easily and inexpensively without penetrating the roof. Rails are not required, but can be used for special applications.

TOP MOUNTING CLAMPS

Select top mounting clamps if you prefer to install modules *after* securing the footings and the rails. This sequence is especially well suited for flush mounting.

Top mounting clamps do not use module mounting holes, thus allowing flexibility in rail placement. See the installation manual for details. Top mounting requires 1 inch between modules. Rails must extend 1½ inches beyond the last module on each end.

Mid clamp

End clamp

BOTTOM MOUNTING CLIPS

Select bottom mounting clips if you plan to attach modules to rails prior to final installation, a sequence well suited for pre-wired rows of modules. No space between modules is required, and rails need not extend past the end modules.

Cautions: (1) Module mounting holes determine spacing of the rails. If rails are parallel to rafters, stringers will likely be necessary under the roof since footings *must* attach to structural members, not decking alone. (2) Flush arrays are significantly more difficult to install when using bottom mounting clips because of access problems when securing footings. Use bottom mounting clips with flush mounts only if the PV modules you are installing have mounting holes near the ends.

Bottom mounting clip

Light Rail, Flush Mount, Clamps: Checklist

- Sizing: Rails and clamps, pp. 4–5.
- Kit pricing: Light rail kits, p.8; clamp kits, pp. 11–14.
- Pro-Pak pricing: Light rails, p. 9; L-feet, p. 9; clamps, pp. 11–14.
- Light rail splices, grounding clips, and grounding lugs, p. 10.
- Standoffs and flashings, p. 15.
- Accessories: hanger bolts, cable ties, shims, security hardware, p. 18.

Standard Rail, Flush, Clamps: Checklist

- Sizing: Rails and clamps, pp. 4–5.
- Kit pricing: Standard rail kits, p.8; clamp kits, pp. 11–14.
- Pro-Pak pricing: Standard rails, p. 9; L-feet, p. 9; clamps, pp. 11–14.
- Light rail splices, grounding clips, and grounding lugs, p. 10.
- Standoffs and flashings, p. 15.
- Accessories: hanger bolts, cable ties, shims, security hardware, p. 18.

Flush Mount, Clips: Checklist

- Sizing: Rails and clamps, pp. 6–7.
- Kit pricing: Standard rail kits, p.8; clips, p. 14.
- Pro-Pak pricing: Standard rails, p. 9; L-feet, p. 9; clips, p.14.
- Light rail splices, grounding clips, and grounding lugs, p. 10.
- Standoffs and flashings, p. 15.
- Accessories: Cable ties, shims, and security hardware, p. 18.

See Cautions 1 and 2 above. Consult UniRac before using aluminum standoffs or hanger bolts in this configuration.

Low Profile Tilt Legs, Clamps: Checklist

Same as "Standard Rail, Flush, Clamps", plus:
- Sizing: Tilt angles, p. 16, and L-feet required, p. 17.
- Pricing: Low profile tilt legs, p 17.

Consult UniRac before using aluminum standoffs or hanger bolts in this configuration.

Low Profile Tilt Legs, Clips: Checklist

Same as "Standard Rail, Flush, Clips", plus:
- Sizing: Tilt angles, p. 16, and L-feet required, p. 17.
- Pricing: Low profile tilt leg, p 17.

Requires mounting holes at ends of modules. Consult UniRac before using aluminum standoffs or hanger bolts in this configuration.

High Profile Tilt Legs, Clamps: Checklist

Same as "Standard Rail, Flush, Clamps", plus:
- Sizing: Tilt angles, p. 17.
- Pricing: High profile tilt legs, p. 17.

Do not use splices with this configuration. Consult UniRac before using aluminum standoffs or hanger bolts.

High Profile Tilt Legs, Clips: Checklist

Same as "Standard Rail, Flush, Clamps", plus:
- Sizing: Tilt angles, p. 17.
- Pricing: High profile tilt legs, p. 17.

Do not use rail splices with this configuration. Consult UniRac before using aluminum standoffs or hanger bolts.

SolarMount®/S-5!™: Checklist

- Sizing: Clamp sets, pp. 19–20
- Pricing: Clamp sets, pp. 19–20.
- Clamp sets with L-feet for use with rails (p. 20).

Top Mounting

Size installations using top mounting clamps with SolarMount® light or standard rails

Sizing can take place as soon as you know the make, model, and number of modules you plan to mount. *Call UniRac for modules not listed.* When sizing is complete, rails, clamps, splices, and L-feet may be ordered in either of two ways:

- Kits (pp. 8, 11 – 14) contain just the right component quantities for a given installation.
- Pro-Pak pricing (pp. 9 – 14) offers bulk components, best for installers who regularly use SolarMount.

Mid clamp

End clamp

Required rail lengths (inches) and top mounting clamp sizes

		Number of modules to be mounted per row										
Module make and model	*Clamp size*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*
BP Solar												
BP365	E	48	72	96	106	132	156	180	192	216	240	252
BP380, -485	E	48	72	96	120	144	168	180	204	226	252	276
BP3125	E	60	96	120	144	168	204	226	252	288	312	336
BP3150, -3160, -4175	E	72	106	132	168	204	240	264	300	324	360	396
BPSX160B, -170B	E	72	106	132	168	204	240	264	300	324	360	396
Evergreen												
EC102, -110, -115	C	60	84	120	144	168	192	216	252	276	300	324
ES170RL, -180RL, -190RL	K	84	120	156	204	240	276	312	360	396	-	-
GE Energy												
GEPV072, -085	C	48	72	96	120	144	156	180	204	226	252	264
GEPV100, -110	C	60	84	120	144	168	192	226	252	276	300	336
GEPVp130	C	60	84	120	144	168	204	226	252	276	312	336
GEPV173	C	84	132	168	204	240	288	324	360	396	-	-
GEPVp185, -200	C	84	132	168	204	240	288	324	360	408	-	-
Isofotón												
I-100	D	60	84	120	144	168	192	216	252	276	300	324
I-150S	D	96	132	180	216	264	300	348	384	432	-	-
I-165	D	84	120	168	204	240	288	324	360	396	-	-
Kaneka												
G-EA060, G-SA060	D	84	132	168	204	252	288	324	372	408	-	-
Kyocera												
KC65T, -85T, -130GT, -130TM	C	60	84	120	144	168	192	216	252	276	300	324
KC175GT	C	84	132	168	204	252	288	324	372	408	-	-
KC200GT	C	84	132	168	204	252	288	324	372	408	-	-
Mitsubishi												
PVMF110EC3, -120EC3	F	60	84	120	144	168	192	216	240	276	300	324
PVMF125EA2LF, -130EA2LF	F	72	106	144	168	204	240	264	300	336	372	396
PVMF165EB3	F	72	106	132	168	204	240	264	300	336	360	396
Photowatt												
PW750	A	48	72	96	120	144	168	192	216	240	264	288
PW1650	D	96	144	180	226	264	312	360	396	-	-	-
Schott Solar												
ASE300, -315, -330	E	106	168	216	264	312	372	420	-	-	-	-

Required rail lengths (inches) and top mounting clamp sizes *(continued)*

		Number of modules to be mounted per row										
Module make and model	*Clamp Size*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*
Sanyo												
HIP190BA3, -195BA3, -200BA3	H	84	120	156	180	216	252	288	324	360	396	432
Sharp												
NE-80EJEA	C	48	72	96	120	144	156	180	204	226	252	276
ND-L3EJEA (123w), -L5EIU (125w)	F	60	84	120	144	168	192	226	252	276	300	336
ND-N2ECU	G	84	132	168	204	252	288	324	372	408	-	-
ND-162U1, -162U1F, -167U3A, -167U1F	F	84	132	168	204	252	288	324	372	408	-	-
NE-170U1, -175U1	F	72	106	144	180	204	240	276	312	348	372	408
ND-200U1, -200U1F, -208U1, -208U1F	F	84	132	168	204	252	288	324	372	408	-	-
SolarWorld (Shell)												
80P, 85P, SP75, SQ80	C	48	72	96	120	144	156	180	204	226	252	264
165P, -PC; 175P, -PC; SQ165	D	72	106	144	168	204	240	276	300	336	372	408
SunPower												
SPR90, -95	F	48	72	96	120	144	156	180	204	226	252	264
SPR200BLK, -210, -215BLK, -220	F	72	106	132	168	204	240	264	300	336	360	396
Suntech												
STP060-12/Sb	B	60	84	106	132	168	192	216	240	264	288	324
STP085S	B	48	72	96	120	144	168	192	204	226	252	276
STP110-12Tb; STP115-12Tc; STP120, -130, -140	C	60	96	120	144	168	204	226	252	288	312	336
STP110-24Ab, STP175-24Ab1	E	72	106	144	168	204	240	276	300	336	372	396
SunWize												
SW85, -90, -95	C	60	84	106	132	156	180	204	226	240	264	288
SW100, -110, -115, -120	C	60	84	120	144	168	192	216	240	276	300	324
SW155, -165	J	72	120	144	180	216	252	288	324	360	396	420
UniSolar												
ES62T	B	72	106	132	168	204	240	264	300	324	360	396
US64	B	72	96	132	156	192	216	252	276	312	336	372
Yingli												
YL80, -85	C	48	72	96	120	144	168	192	204	226	252	276

Bottom Mounting

Size installations using bottom mounting clips with SolarMount® standard rails

Bottom mounting clip

Sizing can take place as soon as you know the make, model, and number of modules you plan to mount. ***Call UniRac for any modules not listed.*** When sizing is complete, rails, splices, and L-feet may be ordered in two ways:

- ***Kits*** (p. 8) contain just the right quantities for a given installation.
- ***Pro-Pak*** pricing (p. 9–10) offers bulk components, best for installers who regularly use SolarMount.

Order 4 bottom mounting clips (p. 14) for every module to be mounted.

Required rail lengths (inches) for bottom mounting

	Number of modules to be mounted per row										
Module make and model	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*
AEE											
AE80J	48	72	96	120	132	156	180	192	216	240	264
BP Solar											
BP365	48	60	84	106	120	144	168	180	204	226	240
BP380, -485	48	72	96	106	132	156	180	192	216	240	264
BP3125	60	84	106	144	168	192	216	240	276	300	324
BP3150, -3160, -4175	72	96	132	156	192	226	252	288	312	348	384
BPSX160B, -170B	72	96	132	168	192	226	252	288	324	348	384
Evergreen											
EC102, -110, -115	60	84	106	132	156	180	216	240	264	288	312
ES170RL, -180RL, -190RL	84	120	156	192	226	264	312	348	384	420	-
GE Energy											
GEPV072, -085	48	72	84	106	132	156	168	192	216	240	252
GEPV100, -110	60	84	106	132	156	192	216	240	264	288	312
GEPVp130	60	84	106	132	168	192	216	240	264	300	324
GEPV173	84	120	156	192	240	276	312	348	384	432	-
GEPVp185, -200	84	120	156	204	240	276	312	360	396	-	-
Isofotón											
I-100	60	84	106	132	156	192	216	240	264	288	312
I-150S	84	132	168	216	252	300	336	372	420	-	-
I-165	84	120	156	192	240	276	312	348	384	420	-
Kaneka											
G-EA060, G-SA060	84	120	156	204	240	276	312	360	396	432	-
Kyocera											
KC65T, -85T, -130GT, -130TM	60	84	106	132	156	180	216	240	264	288	312
KC175GT	84	120	156	204	240	276	312	360	396	432	-
KC200GT	84	120	168	204	240	276	324	360	396	-	-
Mitsubishi											
PVMF110EC3, -120EC3	60	84	106	132	156	180	204	240	264	288	312
PVMF125EA2LF, -130EA2LF	72	96	132	168	192	226	264	288	324	360	384
PVMF165EB3	72	96	132	168	192	226	252	288	324	348	384
Photowatt											
PW750	48	72	96	120	132	156	180	204	226	252	264
PW1650	96	132	180	216	264	300	348	384	432	-	-

Required rail lengths (inches) for bottom mounting *(continued)*

	Number of modules to be mounted per row										
Module make and model	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*
Schott Solar											
ASE300, -315, -330	106	156	204	264	312	360	408	-	-	-	-
Sharp											
NE-80EJEA	48	72	84	106	132	156	168	192	216	240	252
ND-L3EJEA (123w), -L5EIU (125w)	60	84	106	132	168	192	216	240	264	288	324
ND-N2ECU	84	120	168	204	240	276	324	360	396	-	-
ND-162U1, -162U1F, -167U3A, -167U1F	84	120	168	204	240	276	324	360	396	432	-
NE-170U1, NT-175U1	72	106	132	168	240	288	264	300	336	360	396
ND-200U1, -200U1F, -208U1, -208U1F	84	120	168	204	240	276	324	360	396	432	-
SolarWorld (Shell)											
80P, 85P, SP75, SQ80	48	72	84	106	132	156	168	192	216	240	252
165P, -PC; 175P, -PC; SQ165	72	106	132	168	204	226	264	300	324	360	396
SunPower											
SPR90, -95	48	72	84	106	132	156	168	192	216	240	252
SPR200BLK, -210, -215BLK, -220	72	96	132	168	192	226	252	288	324	348	384
Suntech											
STP060-12/Sb	60	84	106	132	156	180	204	226	252	276	312
STP085S	48	72	96	120	132	156	180	204	216	240	264
STP110-12Tb; STP115-12Tc; STP120, -130, -140	60	84	120	144	168	192	216	252	276	300	324
STP110-24Ab, STP175-24Ab1	72	96	132	168	192	226	264	288	324	360	384
SunWize											
SW85, -90, -95	48	72	96	120	144	168	192	216	240	252	276
SW100, -110, -115, -120	60	84	106	132	156	180	204	240	264	288	312
SW155, -165	72	106	144	180	204	240	276	312	348	372	408
UniSolar											
ES62T	72	96	132	168	192	226	252	288	324	348	384
US64	60	96	120	156	180	216	240	264	300	324	360
Yingli											
YL80, -85	48	72	96	120	132	156	180	204	216	240	264

Rail Kits

Each kit mounts a single row of modules and consists of rails plus L-feet and hardware to attach feet to rails. Splice bars are also included in four-rail kits. To determine row lengths required from your installation, see the sizing chart on pages 4–5 for arrays with top mounting clamps, or pages 6–7 for arrays employing bottom mounting clips.

Rails, L-feet, and splices are clear anodized.

Standard 2-rail kits

Each kit contains 2 rails equal to the row length, L-feet, and hardware to join L-feet to rails.

Row length (inches)	No. of L-feet	Nom. shipping data inches	Nom. shipping data lbs	Item no.	List price
48	4	51 x 4 x 3	13	300201	$ 105.00
60	4	63 x 4 x 3	14	300202	121.00
72	4	75 x 4 x 3	16	300203	138.00
84	4	87 x 4 x 3	17	300204	154.00
96	4	99 x 4 x 3	19	300205	170.00
106	4	109 x 4 x 3	20	300206	186.00
120*	6	123 x 4 x 3	22	300207	207.00
132*	6	133 x 4 x 3	24	300208	223.00
144*	6	147 x 4 x 3	25	300209	239.00
156*	6	159 x 4 x 3	27	300210	255.00
168*	6	169 x 4 x 3	28	300211	271.00
180*	6	183 x 4 x 3	30	300212	293.00
192*	8	195 x 4 x 3	31	300213	309.00
204*	8	207 x 4 x 3	33	300214	325.00
216†	8	219 x 4 x 3	34	300215	341.00

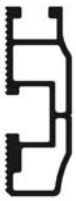
* *Rail kits from 120 to 204 inches normally ship truck freight. For UPS shipment, add one cut and splice fee per rail set (item no. 990201, $30.00).*

† *Ships via truck freight only.*

Standard 4-rail kits for long rows

Each kit contains four rail segments, two splices, L-feet, and hardware to join L-feet to rails. Rail segments and splices assemble into two spliced rails equal to the row length. These kits ship via truck freight only.

Row length (inches)	Segment lengths (in)	No. of L-feet	Nom. shipping data inches	Nom. shipping data lbs	Item no.	List price
226	106/120	10	123 x 5 x 3	40	300224	$373.00
240	120/120	10	123 x 5 x 3	42	300225	389.00
252	132/120	10	135 x 5 x 3	44	300226	405.00
264	132/132	10	135 x 5 x 3	46	300227	416.00
276	144/132	10	147 x 5 x 3	47	300228	432.00
288	144/144	10	147 x 5 x 3	48	300229	448.00
300	156/144	12	159 x 5 x 3	50	300230	469.00
312	156/156	12	159 x 5 x 3	52	300231	485.00
324	168/156	12	171 x 5 x 3	53	300232	501.00
336	168/168	12	171 x 5 x 3	54	300233	517.00
348	180/168	14	183 x 5 x 3	56	300234	533.00
360	180/180	14	183 x 5 x 3	58	300235	544.00
372	192/180	14	195 x 5 x 3	59	300236	560.00
384	192/192	14	195 x 5 x 3	60	300237	576.00
396	204/192	14	207 x 5 x 3	62	300238	592.00
408	204/204	14	207 x 5 x 3	64	300239	608.00
420	216/204	16	219 x 5 x 3	65	300240	630.00
432	216/216	16	219 x 5 x 3	66	300241	640.00



Light 2-rail kits

Each kit contains 2 rails equal to the row length, L-feet, and hardware to join L-feet to rails.

Row length (inches)	No. of L-feet	Nom. shipping data inches	Nom. shipping data lbs	Item no.	List price
48	4	51 x 5 x 3	9	303201	$ 83.00
60	4	63 x 4 x 3	10	303202	94.00
72	4	75 x 4 x 3	11	303203	105.00
84	4	87 x 4 x 3	12	303204	116.00
96	6	99 x 4 x 3	13	303205	127.00
106	6	106 x 4 x 3	14	303206	138.00
120*	6	123 x 4 x 3	15	303207	149.00
132*	8	135 x 4 x 3	17	303208	160.00
144*	8	147 x 4 x 3	18	303209	171.00
156*	8	159 x 4 x 3	19	303210	182.00
168*	8	171 x 4 x 3	20	303211	193.00
180*	10	183 x 4 x 3	21	303212	204.00
192*	10	195 x 4 x 3	22	303213	215.00
204*	10	207 x 4 x 3	23	303214	226.00
216†	10	219 x 4 x 3	22	303215	237.00

* *Kits for row lengths 120 to 204 inches normally ship truck freight. For UPS shipment, add one light rail cut and splice fee per kit (item no. 990211, $30.00).*

† *Ships via truck freight only.*

Light 4-rail kits, spliced

Each kit contains four rail segments, two splices, L-feet, and hardware to join L-feet to rails. Rail segments and splices assemble into two spliced rails equal to the row length. These kits ship via truck freight only.

Row length (inches)	Segment lengths (in)	No. of L-feet	Nom. shipping data inches	Nom. shipping data lbs	Item no.	List price
226	106/120	12	123 x 5 x 3	28	303216	$273.00
240	120	12	123 x 5 x 3	29	303217	284.00
252	132/120	12	136 x 5 x 3	31	303218	295.00
264	132	14	136 x 5 x 3	32	303219	306.00
276	144/132	14	147 x 5 x 3	33	303220	317.00
288	144	14	147 x 5 x 3	34	303221	328.00
300	156/144	16	159 x 5 x 3	35	303222	339.00
312	156	16	159 x 5 x 3	36	303223	350.00
324	168/156	16	171 x 5 x 3	37	303224	361.00
336	168	16	171 x 5 x 3	38	303225	372.00
348	180/168	18	183 x 5 x 3	39	303226	383.00
360	180	18	183 x 5 x 3	41	303227	394.00
372	192/180	18	195 x 5 x 3	41	303228	405.00
384	192	20	195 x 5 x 3	42	303229	416.00
396	204/192	20	207 x 5 x 3	43	303230	427.00
408	204	20	207 x 5 x 3	45	303231	438.00
420	216/204	20	219 x 5 x 3	46	303232	449.00
432	216	20	219 x 5 x 3	46	303233	460.00

Pro-Pak Rails and L-feet

Use Pro-Pak component pricing when regularly using SolarMount on multiple installations.

Standard rail

PRO-PAK: Standard rail bundles consist of 8 rails. Bundles listed here do not include L-feet or hardware. See the sizing chart (pp. 4–5 or 6–7) to deterimine rail length appropriate to your installation. If desired rail length exceeds 240 inches, order a splice and two segments. Spliced segments should be as close to equal in length as possible.

Rail length (inches)	*Bundle of 8 rails*			
	Nominal ship size (inches)	*Nominal ship weight (lbs)*	*Item no.*	*List price*
48	51 x 5 x 3	30	300101	$246.00
60	63 x 5 x 3	36	300102	288.00
72	75 x 5 x 3	44	300103	331.00
84	87 x 5 x 3	50	300104	374.00
96	99 x 5 x 3	55	300105	417.00
106	109 x 5 x 3	61	300106	460.00
120	123 x 5 x 3	67	300107	508.00
132	135 x 5 x 3	72	300108	556.00
144	147 x 5 x 3	78	300109	604.00
156	159 x 5 x 3	92	300110	652.00
168	171 x 5 x 3	100	300111	700.00
180	183 x 5 x 3	108	300112	749.00
192	195 x 5 x 3	114	300113	797.00
204	207 x 5 x 3	120	300114	845.00
216	219 x 5 x 3	128	300115	893.00
228	229 x 5 x 3	135	300116	930.00
240	243 x 5 x 3	142	300117	979.00

Light rail

PRO-PAK: Light rail bundles consist of 10 rails. Bundles listed here do not include L-feet or hardware. See the top mounting sizing chart in (pp. 6–7) to deterimine rail length appropriate to your installation. If desired rail length exceeds 216 inches, order a splice and two segments. Spliced segments should be as close to equal in length as possible.

Rail length (inches)	*Bundle of 10 rails*			
	Nominal ship size (inches)	*Nominal ship weight (lbs)*	*Item no.*	*List price*
48	51 x 5 x 3	25	303101	$199.00
60	63 x 5 x 3	30	303102	239.00
72	75 x 5 x 3	36	303103	279.00
84	87 x 5 x 3	41	303104	319.00
96	99 x 5 x 3	45	303105	359.00
106	109 x 5 x 3	50	303106	399.00
120	123 x 5 x 3	55	303107	439.00
132	135 x 5 x 3	59	303108	479.00
144	147 x 5 x 3	64	303109	519.00
156	159 x 5 x 3	75	303110	559.00
168	171 x 5 x 3	82	303111	599.00
180	183 x 5 x 3	88	303112	639.00
192	195 x 5 x 3	93	303113	679.00
204	207 x 5 x 3	98	303114	719.00
216	219 x 5 x 3	104	303115	759.00

Serrated L-feet

PRO-PAK: Each L-foot includes a stainless steel bolt and flange nut to attach the foot to a SolarMount rail. Lag bolts are not included. Rail set pricing (p. 8) lists the appropriate number of L-feet per pair of rails.

Quantity	*Nominal ship wt. (lbs)*	*Part no.*	*List price*
1		310068	$ 4.70
20	5	310067	81.00

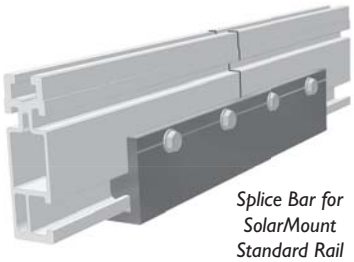
Pro-Pak Splices

Use Pro-Pak component pricing when regularly using SolarMount on multiple installations.

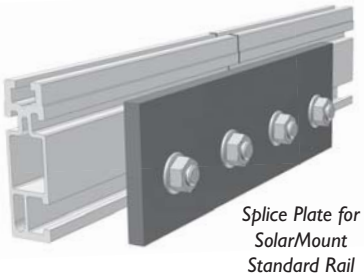
Splices for SolarMount® standard rail

PRO-PAK: Order one splice wherever two segments are to be joined into a single rail.

Type	Qty.	Nom. ship wt. (lbs)	Part no.	List price
Plate w/ bolts, flange nuts	1	1	310214	$ 10.00
Plate w/ bolts, flange nuts	20	14	310216	181.00
Bar w/ hardware	1	1	310230	6.00
Bar w/ hardware	20	10	310229	107.00



Splice Bar for SolarMount Standard Rail

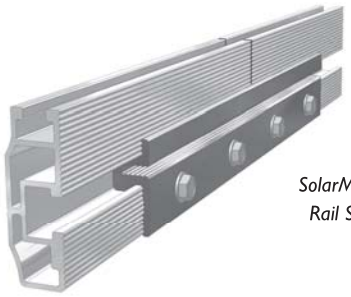


Splice Plate for SolarMount Standard Rail

Splices for SolarMount® light rail

PRO-PAK: Each splice joins two rail segments.

Type	Qty.	Nom. ship wt. (lbs)	Part no.	List price
Bar w/ hardware	1	1	310231	$ 4.00
	20	5	310232	77.00



SolarMount Light Rail Splice Bar

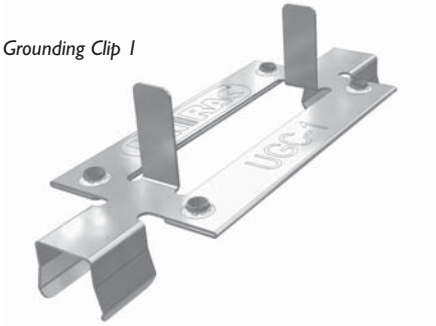
Pro-Pak Grounding Hardware

UniRac grounding clip 1 (UGC-1)

PRO-PAK: Order one grounding clip for every two top mounting clamps (end clamps + mid clamps) in your installation. Only one of the two rails in each row requires grounding clips.

Quantity	Nominal ship weight (lbs)	Item no.	List price
1	1	980000	$ 1.20
20	1	980001	19.00
100	1	980002	92.00
250	2	980003	187.00
500	4	980004	360.00

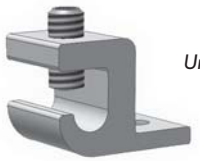
UniRac Grounding Clip 1



Grounding lugs

PRO-PAK: Order two grounding lugs for each rail splice and one addtional lug for each rail.

Quantity	Nominal ship weight (lbs)	Item no.	List price
1	1	980010	$ 12.50
10	2	980011	112.00
100	8	980012	995.00



UniRac Grounding Lug

Top Mounting Clamps

For individual installations, order 1 kit for each row of modules you plan to mount.

Use Pro-Pak component prices when regularly using SolarMount on multiple installations. See page 4 for the clamp size for your module type. ***End clamps:*** Order 4 for each *row* of modules you plan to mount. ***Mid clamps:*** For each row, take one less than the number of modules in the row and multiply that figure by 2. For example, a row of 4 modules requires 6 mid clamps: (4 - 1) x 2 = 6.

Clamps are sized to the thickness of the PV modules you are mounting.

Mid clamp, sizes A–F and J–K

End clamp, sizes A–F and J–K

A for modules 24–26 mm thick

Photowatt 750

KITS: End clamps, mid clamps, T-bolts, and flange nuts for one row of modules

Modules per row	Clear anodized Part no.	Clear anodized List price	Nominal ship wt. (lbs)
2	320024	$20.25	1
3	320032	24.00	2
4	320040	27.75	2
5	320048	31.50	2
6	320056	35.25	2
7	320062	39.00	2
8	320068	42.75	2
9	320125	46.50	3
10	320126	50.25	3
11	320127	54.00	3
12	320128	57.75	3

PRO-PAK: Clamps with T-bolts and flange nuts

Clamp	Qty	Clear anodized Part no.	Clear anodized List price	Nominal ship wt. (lbs)
End	1	320001	$ 2.50	
	20	320012	41.75	2
Mid	1	320008	2.50	
	20	320020	41.75	2

B for modules 30–32 mm thick

Suntech (<100 watts), UniSolar

KITS: End clamps, mid clamps, T-bolts, and flange nuts for one row of modules

Modules per row	Clear anodized Part no.	Clear anodized List price	Nominal ship wt. (lbs)
2	320025	$20.25	1
3	320033	24.00	2
4	320041	27.75	2
5	320049	31.50	2
6	320057	35.25	2
7	320063	39.00	2
8	320069	42.75	3
9	320129	46.50	3
10	320130	50.25	3
11	320131	54.00	3
12	320132	57.75	3

PRO-PAK: Clamps with T-bolts and flange nuts

Clamp	Qty	Clear anodized Part no.	Clear anodized List price	Nominal ship wt. (lbs)
End	1	320002	$ 2.50	
	20	320013	41.75	2
Mid	1	320008	2.50	
	20	320020	41.75	2

C for modules 34–36 mm thick

Evergreen (EC), GE Energy, Kyocera, Sharp NE-80EJEA, SolarWorld (<100 watts), Suntech (see p, 5 for specifics), SunWize (<150 watts), Yingli.

KITS: End clamps, mid clamps, T-bolts, and flange nuts for one row of modules

Modules per row	Clear anodized Part no.	Clear anodized List price	Dark bronze anodized Part no.	Dark bronze anodized List price	Nominal ship wt. (lbs)
2	320026	$20.25	320088	$26.75	1
3	320034	24.00	320089	31.75	2
4	320042	27.75	320090	36.75	2
5	320050	31.50	320091	42.00	2
6	320058	35.25	320092	47.00	2
7	320064	39.00	320093	52.00	2
8	320070	42.75	320094	57.25	3
9	320133	46.50	320149	62.25	3
10	320134	50.25	320150	67.25	3
11	320135	54.00	320151	72.50	3
12	320136	57.75	320152	77.50	3

PRO-PAK: Clamps with T-bolts and flange nuts

Clamp	Qty	Clear anodized Part no.	Clear anodized List price	Nominal ship wt. (lbs)
End	1	320003	$ 2.50	
	20	320014	41.75	2
Mid	1	320008	2.50	
	20	320020	41.75	2

Clamp	Qty	Dark bronze anodized Part no.	Dark bronze anodized List price	Nominal ship wt. (lbs)
End	1	320117	$ 3.25	
	20	320081	57.75	2
Mid	1	320119	3.25	
	20	320084	57.75	2

Top Mounting Clamps (continued)

D for modules 38–40 mm thick

Isofotón, Kaneka, Photowatt PW1650, SolarWorld (>100 watts), See illustrations, page 11.

KITS: End clamps, mid clamps, T-bolts, and flange nuts for one row of modules

Modules per row	Clear anodized Part no.	Clear anodized List price	Dark bronze anodized Part no.	Dark bronze anodized List price	Nominal ship wt. (lbs)
2	320027	$20.25	320174	$26.75	1
3	320035	24.00	320175	31.75	2
4	320043	27.75	320176	36.75	2
5	320051	31.50	320177	42.00	2
6	320059	35.25	320178	47.00	2
7	320065	39.00	320179	52.00	2
8	320071	42.75	320180	57.25	3
9	320137	46.50	320181	62.25	3
10	320138	50.25	320182	67.25	3
11	320139	54.00	320183	72.50	3
12	320140	57.75	320184	77.50	3

PRO-PAK: Clamps with T-bolts and flange nuts

Clamp	Qty	Clear anodized Part no.	Clear anodized List price	Nominal ship wt. (lbs)
End	1	320004	$ 2.50	
	20	320015	41.75	2
Mid	1	320009	2.50	
	20	320021	41.75	2

Clamp	Qty	Dark bronze anodized Part no.	Dark bronze anodized List price	Nominal ship wt. (lbs)
End	1	320173	$ 3.25	
	20	320185	57.75	2
Mid	1	320120	3.25	
	20	320085	57.75	2

E for modules 50–52 mm thick

BP Solar, Schott Solar, Suntech (see p. 5 for specifics). See illustrations, page 11.

KITS: End clamps, mid clamps, T-bolts, and flange nuts for one row of modules

Modules per row	Clear anodized Part no.	Clear anodized List price	Dark bronze anodized Part no.	Dark bronze anodized List price	Nominal ship wt. (lbs)
2	320028	$20.25	320095	$26.75	1
3	320036	24.00	320096	31.75	2
4	320044	27.75	320097	36.75	2
5	320052	31.50	320098	42.00	2
6	320060	35.25	320099	47.00	2
7	320066	39.00	320100	52.00	2
8	320072	42.75	320101	57.25	3
9	320141	46.50	320153	62.25	3
10	320142	50.25	320154	67.25	3
11	320143	54.00	320155	72.50	3
12	320144	57.75	320156	77.50	3

PRO-PAK: Clamps with T-bolts and flange nuts

Clamp	Qty	Clear anodized Part no.	Clear anodized List price	Nominal ship wt. (lbs)
End	1	320005	$ 2.50	
	20	320016	41.75	3
Mid	1	320009	2.50	
	20	320021	41.75	2

Clamp	Qty	Dark bronze anodized Part no.	Dark bronze anodized List price	Nominal ship wt. (lbs)
End	1	320118	$ 3.25	
	20	320082	57.75	3
Mid	1	320120	3.25	
	20	320085	57.75	2

F for modules 45–47 mm thick

Mitsubishi, Sharp (>100 watts, excluding ND-N2ECU), SunPower. See illustrations, page 11.

KITS: End clamps, mid clamps, T-bolts, and flange nuts for one row of modules

Modules per row	Clear anodized Part no.	Clear anodized List price	Dark bronze anodized Part no.	Dark bronze anodized List price	Nominal ship wt. (lbs)
2	320029	$20.25	320102	$26.75	1
3	320037	24.00	320103	31.75	2
4	320045	27.75	320104	36.75	2
5	320053	31.50	320105	42.00	2
6	320061	35.25	320106	47.00	2
7	320067	39.00	320107	52.00	2
8	320073	42.75	320108	57.25	3
9	320145	46.50	320157	62.25	3
10	320146	50.25	320158	67.25	3
11	320147	54.00	320159	72.50	3
12	320148	57.75	320160	77.50	3

PRO-PAK: Clamps with T-bolts and flange nuts

Clamp	Qty	Clear anodized Part no.	Clear anodized List price	Nominal ship wt. (lbs)
End	1	320006	$ 2.50	
	20	320017	41.75	3
Mid	1	320009	2.50	
	20	320021	41.75	2

Clamp	Qty	Dark bronze anodized Part no.	Dark bronze anodized List price	Nominal ship wt. (lbs)
End	1	320124	$ 3.25	
	20	320123	57.75	3
Mid	1	320120	3.25	
	20	320085	57.75	2

Prices effective March 1, 2007 • Prices and specifications are subject to change without notice.

Top Mounting Clamps (continued)

G for Sharp lipped modules

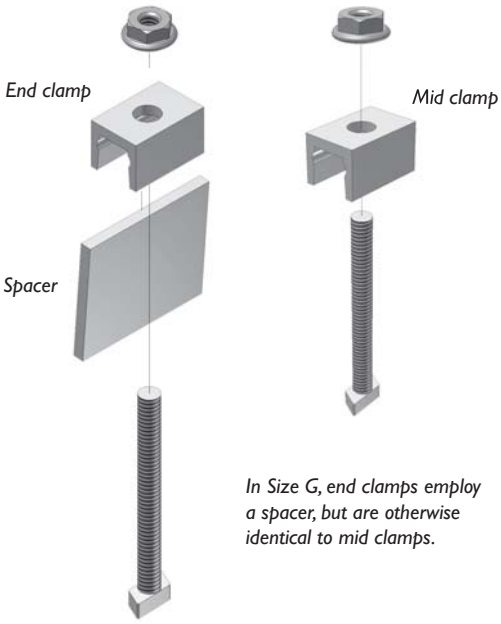
Sharp Solar ND-N2ECU (140W).

KITS: End clamps, mid clamps, T-bolts, and flange nuts for one row of modules

Modules per row	***Dark bronze anodized only*** *Part no.*	*List price*	*Nominal ship wt. (lbs)*
2	320031	$26.75	1
3	320039	31.00	1
4	320047	35.25	1
5	320055	39.50	2
6	320112	43.75	2
7	320113	48.00	2
8	320114	52.25	2
9	320169	56.50	3
10	320170	61.00	3
11	320171	65.27	3
12	320172	69.50	3

PRO-PAK: Clamps with T-bolts and flange nuts

Clamp	*Qty*	***Dark bronze anodized only*** *Part no.*	*List price*	*Nominal ship wt. (lbs)*
End	1	320007	$ 3.25	
	20	320083	57.75	2
Mid	1	320122	$ 3.25	
	20	320087	47.00	2



In Size G, end clamps employ a spacer, but are otherwise identical to mid clamps.

H for Sanyo lipped modules

Sanyo HIP series.

KITS: End clamps, mid clamps, hexhead bolts, and flange nuts for one row of modules

Modules per row	***Dark bronze anodized only*** *Part no.*	*List price*	*Nominal ship wt. (lbs)*
2	320030	$19.75	1
3	320038	22.25	1
4	320046	25.00	1
5	320054	27.75	1
6	320109	30.50	2
7	320110	33.00	2
8	320111	35.75	2
9	320165	38.50	3
10	320166	41.00	3
11	320167	43.75	3
12	320168	46.50	3

PRO-PAK: Clamps with hexhead bolts and flange nuts

Clamp	*Qty*	***Dark bronze anodized only*** *Part no.*	*List price*	*Nominal ship wt. (lbs)*
All*	1	320121	$ 2.25†	
	20	320086	38.50†	2

** In size H, end clamps and mid clamps are identical. Hexhead bolts replace T-bolts.*

Top Mounting Clamps (continued)

K for modules 39–41 mm thick

Evergreen (ES series). See illustrations, page 11.

KITS: End clamps, mid clamps, T-bolts, and flange nuts for one row of modules

Modules per row	Clear anodized Part no.	Clear anodized List price	Dark bronze anodized Part no.	Dark bronze anodized List price	Nominal ship wt. (lbs)
2	320209	$20.25	320222	$26.75	1
3	320210	24.00	320223	31.75	2
4	320211	27.75	320224	36.75	2
5	320212	31.50	320225	42.00	2
6	320213	35.25	320226	47.00	2
7	320214	39.00	320227	52.00	2
8	320215	42.75	320228	57.25	3
9	320216	46.50	320229	62.25	3
10	320217	50.25	320230	67.25	3
11	320218	54.00	320231	72.50	3
12	320219	57.75	320232	77.50	3

PRO-PAK: Clamps with T-bolts and flange nuts

Clamp	Qty	Clear anodized Part no.	Clear anodized List price	Nominal ship wt. (lbs)
End	1	320220	$ 2.50	
	20	320221	41.75	3
Mid	1	320009	2.50	
	20	320021	41.75	3

Clamp	Qty	Dark bronze anodized Part no.	Dark bronze anodized List price	Nominal ship wt. (lbs)
End	1	320233	$ 3.25	
	20	320234	57.75	3
Mid	1	320120	3.25	
	20	320085	57.75	3

J for modules 41–43 mm thick

SunWize SW155, SW165. See illustrations, page 11.

KITS: End clamps, mid clamps, T-bolts, and flange nuts for one row of modules

Modules per row	Clear anodized Part no.	Clear anodized List price	Nominal ship wt. (lbs)
2	320074	$20.00	1
3	320075	24.00	2
4	320076	27.00	2
5	320077	31.00	2
6	320078	35.00	2
7	320115	39.00	2
8	320116	42.00	3
9	320161	46.00	3
10	320162	50.00	3
11	320163	54.00	3
12	320164	57.00	3

PRO-PAK: Clamps with T-bolts and flange nuts

Clamp	Qty	Clear anodized Part no.	Clear anodized List price	Nominal ship wt. (lbs)
End	1	320080	$ 2.50	
	20	320079	41.75	3
Mid	1	320009	$ 2.50	
	20	320021	41.75	2

Bottom Mounting Clips

Clips for all modules with mounting holes

Order 4 clips for each module in your array. Clips are packed with stainless steel bolts and flange nuts. See the sizing chart on pages 6–7 for modules that can be used with bottom mounting clips.

Bottom mounting clip

Bottom Mounting Clips

Quantity	PV modules to be mounted	Nominal ship wt. (lbs)	Part no.	List price
1			321001	$1.50
4	1	1	321218	7.00
20	5	1	321002	25.50

Prices effective March 1, 2007 • Prices and specifications are subject to change without notice.

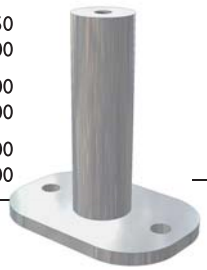
Standoffs

For applications information, consult our Installation Manual 907: *Standoffs and Flashings*. Each standoffs is packed with two zinc plated lag bolts. Each flat top standoff also has a stainless steel bolt and lock washer.

Two-piece aluminum flat top standoffs

Use in conjunction with L-feet. See also "Flashings for aluminum standoffs" (below). Consult the SunFrame Price List for dark bronze standoffs. Consult UniRac before using aluminum standoffs in tilt-leg installations.

Height (inches)	*Quantity*	*Nominal ship wt. (lbs)*	*Part no.*	*List price*
3	1		310027	$ 11.75
3	12	9	310055	122.00
4	1		310028	12.50
4	12	10	310056	131.00
6	1		310029	14.00
6	12	12	310057	150.00
7	1		310030	15.00
7	12	13	310058	160.00



One-piece, zinc plated steel flat top standoffs

Use in conjuction with L-feet. See also "Flashings for steel standoffs" (below).

Height (inches)	*Quantity*	*Nominal ship wt. (lbs)*	*Part no.*	*List price*
3	1	2	310009	$ 18.00
3	12	16	310051	192.00
4	1	2	310010	18.75
4	12	18	310052	199.00
6	1	2	310011	19.25
6	12	22	310053	205.00
7	1	2	310012	19.75
7	12	24	310054	211.00

Raised flange, zinc plated steel standoffs

Use without L-feet. See also "Flashings for steel standoffs" (below).

Height (inches)	*Quantity*	*Nominal ship wt. (lbs)*	*Part no.*	*List price*
3	1	2	310017	$ 19.25
3	12	16	310047	205.00
4	1	2	310018	19.75
4	12	18	310048	211.00
6	1	2	310019	20.25
6	12	22	310049	218.00
7	1	2	310020	20.75
7	12	25	310050	224.00

Custom steel standoffs and lag bolt credit

	Description	*List price*
310043	Surcharge for added height, per standoffs, per inch (12 in. max height—*steel standoffs only*)	$ 0.50
990341	Lag bolt removal credit, per standoff	(0.75)

Flashings

These flashings work with our steel and aluminum standoffs. Soft aluminum flashings can be molded to fit curved roofing material, such as Spanish tile.

All metal flashing

No-Calk® collared flashing

Flashings for aluminum standoffs

Packages each include 12 flashings. Fits standoff *O.D. of 1 1/8 inches.*

Description	*Nom. ship wt. (lbs)*	*Part no.*	*List price*
Galvanized 12 1/2″ x 8 3/4″ base, No-Calk collar (Oatey # O-11830)	11	990109	$ 99.00
Aluminum 12″ x 9″ base, all metal	12	310044	176.00
Soft aluminum, 18″ x 18″ base, all metal	14	310045	272.00

Flashings for steel standoffs

Packages each include 12 flashings. Fits standoff *O.D. of 1 5/8 inches.*

Description	*Nom. ship wt. (lbs)*	*Part no.*	*List price*
Galvanized, 12 1/2″ x 8 3/4″ base, No-Calk collar (Oatey # O-11840)	11	990101	$ 86.50
Aluminum, 12 1/2″ x 8 3/4″ base, No-Calk collar (Oatey # O-12920)	6	990102	126.00
Soft aluminum, 18″ x 18″ base, No-Calk collar (Oatey # O-12836)	12	990103	180.00

Tilt Leg Kits — Low and High Profile Adjustable

Tilt leg kits — low profile adjustable

If ordering kits for use with SolarMount rail kits (p. 6), no other items are required. If ordering for use with Pro-Pak rails, then L-feet must also be ordered (p. 9).

Sizing Chart: Tilt angles for low profile leg kits

In low profile arrays, tilt angles depend on leg length and module length.

Module make and model	Leg kit model number 310121	310122	310123
AEE			
AE80J*	15-19°	31-49°	45-60°
BP Solar			
BP365	16-20°	34-53°	49-60°
BP380, -485	15-20°	32-51°	47-60°
BP3125	11-14°	24-37°	34-56°
BP3150, -3160, -4175	11-14°	22-35°	32-53°
BPSX160B, -170B	11-13°	22-35°	32-53°
Evergreen			
EC102, -110, -115	12-15°	24-38°	35-58°
ES170RL, -180RL, -190RL	16-20°	34-53°	48-60°
GE Energy			
GEPV072, -085	15-19°	31-49°	45-60°
GEPV100, -110	21-27°	45-60°	60°
GEPVp130	13-16°	26-41°	38-60°
GEPV173	21-27°	45-60°	60°
GEPVp185†, -200†	12-16°	26-41°	38-60°
Isofoton			
I-100	17-21°	36-56°	51-60°
I-150S	17-21°	36-56°	51-60°
I-165	17-21°	36-56°	51-60°
Kaneka			
G-EA060†, G-SA060†	19-24°	40-60°	58-60°
Kyocera			
KC65T, -85T, 130GT, -130TM	11-15°	24-38°	35-57°
KC175GT	16-21°	35-55°	50-60°
KC200GT	14-18°	30-47°	43-60°
Mitsubishi			
PVMF110EC3†, -120EC3†	13-17°	27-43°	39-60°
PVMF125EA2LF, -130EA2LF	15-19°	31-50°	45-60°
PVMF165EB3	12-15°	26-40°	37-60°
Photowatt			
PW750, -1650	14-17°	29-45°	41-60°

Module make and model	Leg kit model number 310121	310122	310123
Sanyo			
HIP-190BA3†, -195BA3†, -200BA3†	14-18°	30-47°	42-60°
Schott Solar			
ASE300, -315, -330	15-19°	31-49°	44-60°
Sharp			
NE-80EJEA	14-18°	31-48°	44-60°
ND-L3EJEA (123w), -L5EIU (125w)	13-17°	28-44°	40-60°
ND-N2ECU	17-21°	36-56°	51-60°
ND-162U1, -162U1F, -167U3, -167U1F	17-21°	36-56°	51-60°
NE-165U1†, NT-175U1†	12-15°	25-39°	36-59°
NE170U1, -175U1	15-19°	31-50°	45-60°
ND-200U1, -200U1F, -208U1, 208U1F	13-16°	27-42°	39-60°
SolarWorld (Shell)			
80P, 85P, SP75, SQ80	14-18°	30-47°	43-60°
65P, -PC; 75P, -PC; SQ165	12-15°	25-39°	36-60°
SunPower			
SPR90, -95	17-21°	35-55°	50-60°
SPR200BLK, -210, -215BLK, -220	17-22°	37-58°	53-60°
Suntech			
STP060-12/Sb, STP085S	17-21°	35-56°	51-60°
STP110-12Tb; STP115-12Tc; STP120, -130, -140	10-13°	21-33°	30-49°
STP110-24Ab; STP175-24Ab1	9-12°	19-30°	28-45°
SunWize			
SW85, -90, -95	12-15°	25-40°	36-60°
SW100, -110, -115, -120	12-15°	25-40°	36-60°
SW155, -165	11-14°	23-36°	33-54°
UniSolar			
ES62T†	15-19°	31-49°	44-60°
US64	17-21°	35-56°	51-60°
Yingli			
YL80, -85†	16-20°	33-52°	48-60°

*Mount with bottom mounting clips only.
†In low profile tilt-up applications, mount with top mounting clamps only.

Tilt leg kits — low profile adjustable (continued)

Sizing Chart: Quantity of low profile tilt legs required

The number of tilt legs required in a low profile array depends on the length of the mounting rails.

Rail length per row	Tilt legs required per row
48" to 106"	2
120" to 180"	3
192" to 216"	4
226" to 288"	5
300" to 336"	6
348" to 408"	7
420" to 432"	8

Price List: Low profile tilt legs (1 leg per kit)

Each low profile tilt leg kit contains one square tube and one strut insert, two L-feet, and stainless steel hardware for use with SolarMount rail kit.

Part no.	*Maximum leg extension (inches)*	*Nom. shipping data*		*List price*
		inches	*lbs*	
310121	12	10 x 3 x 3	2	$32.00
310122	30	19 x 3 x 3	3	39.50
310123	44	26 x 3 x 3	4	46.00

Tilt leg kits — high profile adjustable

Order one high profile tilt leg kit for each rail kit. If ordering rails from the Pro-Pak price list (p. 9), order one high profile tilt leg kit for each pair of rails required in your installaton.

Never use high profile legs with spliced rails or with rails longer than 180 inches.

Sizing Chart: Tilt angles for high profile legs

In high profile arrays, tilt anglesdepends on leg and rail lengths.

Rail length (inches)	*Leg kit model number*			*Rail length (inches)*	*Leg kit model number*		
	310107	*310108*	*310109*		*310110*	*310111*	*310112*
48	9–21°	30–60°		120	26–60°	5–12°	16–47°
60	7–17°	24–60°	37–60°	132	24–60°	5–11°	15–42°
72	6–14°	19–54°	31–60°	144	22–60°	4–10°	13–38°
84	5–12°	17–46°	26–60°	156	20–60°	4– 9°	12–35°
96	4–10°	14–40°	23–60°	168	18–55°	4– 9°	11–33°
106	4– 9°	13–36°	21–60°	180	17–51°	3– 8°	11–30°

Price List: High profile tilt legs (2 leg kit)

Each kit contains two square tubes, two strut inserts, and fasteners for use with SolarMount rail kits (p. 8).

Part no.	*Maximum leg extension (inches)*	*Nom. shipping data*		*List price*
		inches	*lbs*	
310107	12	10 x 2 x 4	3	$46.00
310108	44	26 x 2 x 4	7	70.00
310109	72	40 x 2 x 4	10	92.00

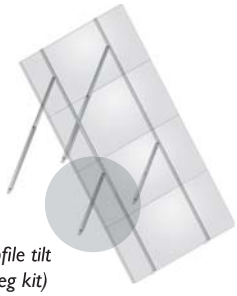
High profile tilt legs (2 leg kit)

For rails 48 to 106 inches long, use leg kits with a single leg per rail, 2 legs per kit.

Price List: High profile tilt legs (4 leg kit)

Each kit contains four square tubes, four strut inserts, and fasteners for use with SolarMount rail kits (p. 8).

Part no.	*Maximum leg extension (inches)*	*Nom. shipping data*		*List price*
		inches	*lbs*	
310110	104	56 x 4 x 4	20	$188.00
310111	18	13 x 4 x 4	7	84.00
310112	64	36 x 4 x 4	16	141.00



High profile tilt legs (4 leg kit)

Rails 120 to 180 inches long require leg kits with a long and a short leg for each rail, 4 legs per kit.

Accessories

Solve problems specific to your site and ensure a secure, aesthetically pleasing installation .

Security hardware

Security hardware dramatically increases the difficulty and time required for a thief to dismantle a PV array and steal its components. Breakaway nuts work well in conjuction with top mounting clamps and footing bolts.

Note that starhead bolt heads do not fit into SolarMount rail slots (where standard bolt heads are inaccessible). Use them where heads are exposed—with bottom mounting module clips, for example.

Star key

Starhead bolt

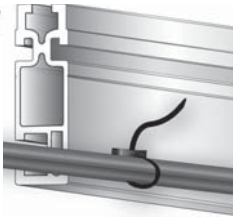
Breakaway nut before and after installation

Security hardware

Description	Quantity	Part no.	List price
Starhead bolt, s/s, 1/4″ x 3/4″	1	321205	$ 1.40
	20	321220	23.50
Starhead bolt, s/s, 3/8″ x 1 1/4″	1	321206	3.70
	20	321221	64.00
Breakaway nut, aluminum, 1/4″	1	321207	1.35
	20	321222	22.50
Breakaway nut, aluminum, 3/8″	1	321208	1.75
	20	321223	29.75
Star key, 1/4″	1	321209	17.50
Star key, 3/8″	1	321210	21.25

Cable ties

Cable ties fit into ¼ -inch holes drilled along SolarMount rails.



Shims

Shims level or raise standoffs and L-feet and precisely align rails. Horseshoe shims come in three color-coded thicknesses. Our tapered shim is particularly useful in leveling.

Cable ties and shims

Description	Qty	Nom. ship wt. (lbs)	Part no.	List price
Push mount cable tie, black	100	1	990104	$12.00
Shim, 1 1/2″ x 2″ x 1/16″, blue plastic	20	1	990105	1.50
Shim, 1 1/2″ x 2″ x 1/8″, red plastic	20	1	990106	3.00
Shim, 1 1/2″ x 2″ x 1/4″, black plastic	20	1	990107	4.50
Tapered shim, 1 1/2″ x 3 3/8″, black plastic	20	1	990108	11.00

Hanger bolts and driver

Used in conjuction with L-feet, 8-inch hanger bolts support SolarMount rails above tile or corrugated metal roofs. A driver allows easy insertion into 3/16-inch pilot holes in the rafters.

Description	Quantity	Nominal ship wt. (lbs)	Part no.	List price
8" x 3/8" s/s hanger bolt with s/s nut and washers	1	1	310025	$ 12.00
	20	5	310046	192.00
3/8" hanger bolt driver	1	1	310026	18.50

Driver

Hanger bolt

Standard fasteners

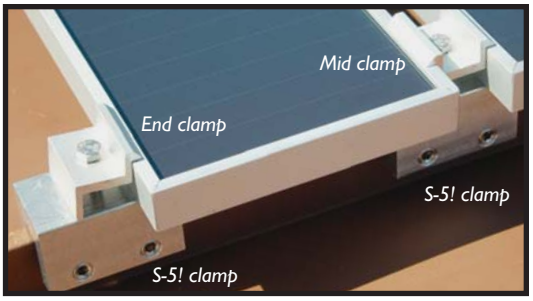
Avoid chasing fasteners after job-site drop. Frequent SolarMount users can keep spares handy in their toolboxes.

Standard stainless steel fasteners

Description	Qty	Nom. ship wt. (lbs)	Part no.	List Price
Clear finish				
Bolt, 1/4″ x 5/8″, flange nut	1		321202	$ 0.55
	4		321203	1.85
	20	1	321204	8.50
Bolt, 3/8″ x 3/4″, flange nut	1		990335	1.20
	20	3	990336	20.25
Bolt, 3/8″ x 1 1/4″, flange nut	1		990337	1.25
	20	3	990338	22.00
T-bolt, 1/4″ x 2″, flange nut	1		321212	1.30
	20	1	321213	26.00
T-bolt, 1/4″ x 2 1/2″, flange nut	1		321214	1.50
	20	1	321215	29.50
Dark finish				
T-bolt, 1/4″ x 2″, flange nut	1		321272	1.40
	20	1	321273	27.75
T-bolt, 1/4″ x 2 1/2″, flange nut	1		321274	1.75
	20	1	321275	34.00

SolarMount® / S-5!™ PV Clamp Sets

S-5! PV clamps provide non-penetrating attachment points to standing seam metal roofs. Select SolarMount end clamps and mid clamps and attach modules directly to the S-5! clamp without mounting rails. Use end clamps on the edge of the array and mid clamps between rows within the array. End clamps and mid clamps are anodized. S-5! clamps are mill finish.



C for modules 34–36 mm thick

Evergreen (EC), GE Energy, Kyocera, Sharp NE-80EJEA, SolarWorld (<100 watts), Suntech (see p. 5 for specifics), SunWize (<150 watts), Yingli.

	Clear Anodized			Dark Bronze Anodized			Nominal
	Quantity	Part no.	List price	Quantity	Part no.	List price	ship wt. (lbs)
S-5! + Mid Clamp Set	1	321224	$ 21.00	1	321226	$ 21.50	1
	20	321236	385.00	20	321238	395.00	10
S-5! + End Clamp Set	1	321228	21.00	1	321232	21.50	1
	20	321240	385.00	20	321244	395.00	10

D for modules 38–40 mm thick

Isofotón, Kaneka, Photowatt PW1650, SolarWorld (>100 watts),

	Clear Anodized			Dark Bronze Anodized			Nominal
	Quantity	Part no.	List price	Quantity	Part no.	List price	ship wt. (lbs)
S-5! + Mid Clamp Set	1	321224	$ 21.00	1	321226	$ 21.50	1
	20	321236	385.00	20	321238	395.00	10
S-5! + End Clamp Set	1	321229	21.00	1	321233	21.50	1
	20	321241	385.00	20	321245	395.00	10

E for modules 50–52 mm thick

BP Solar, Schott Solar, Suntech (see p. 5 for specifics).

	Clear Anodized			Dark Bronze Anodized			Nominal
	Quantity	Part no.	List price	Quantity	Part no.	List price	ship wt. (lbs)
S-5! + Mid Clamp Set	1	321225	$ 21.00	1	321227	$ 21.50	1
	20	321237	385.00	20	321239	395.00	10
S-5! + End Clamp Set	1	321230	21.00	1	321234	21.50	1
	20	321242	385.00	20	321246	395.00	10

F for modules 45–47 mm thick

Mitsubishi, Sharp (>100 watts, excluding ND-N2ECU), SunPower.

	Clear Anodized			Dark Bronze Anodized			Nominal
	Quantity	Part no.	List price	Quantity	Part no.	List price	ship wt. (lbs)
S-5! + Mid Clamp Set	1	321225	$ 21.00	1	321227	$ 21.50	1
	20	321237	385.00	20	321239	395.00	10
S-5! + End Clamp Set	1	321231	21.00	1	321235	21.50	1
	20	321243	385.00	20	321247	395.00	10

Design Tools

We'll quote an installation for your unique site

Complete our brief, on-line SolarMount/S-5! Questionnaire at www.unirac.com and you'll receive:

- A bill of materials for all required components;
- Price quote and delivery lead time.

G for Sharp lipped modules

Sharp Solar ND-N2ECU (140W).

	Dark Bronze Anodized			Nominal
	Quantity	Part no.	List price	ship wt. (lbs)
S-5! + Mid Clamp Set	1	321251	$ 21.50	1
	20	321250	395.00	20
S-5! + End Clamp Set	1	321253	21.50	1
	20	321252	390.00	20

H for Sanyo lipped modules

Sanyo HIP series.

	Dark Bronze Anodized			Nominal
	Quantity	Part no.	List price	ship wt. (lbs)
S-5! + Mid Clamp Set	1	321248	$ 21.00	1
(Mid & end are identical.)	20	321249	375.00	10

K for modules 39–41 mm thick

Evergreen (ES series).

	Clear Anodized			Dark Bronze Anodized			Nominal
	Quantity	Part no.	List price	Quantity	Part no.	List price	ship wt. (lbs)
S-5! + Mid Clamp Set	1	321224	$ 21.00	1	321226	$ 21.50	1
	20	321236	385.00	20	321238	395.00	10
S-5! + End Clamp Set	1	321268	21.00	1	321270	21.50	1
	20	321269	385.00	20	321271	395.00	10

For mounting modules with rails

Includes 3/8-inch hardware to fasten L-foot to clamp and rail (not included) to L-foot.

	Clear Anodized			Dark Bronze Anodized			Nominal
	Quantity	Part no.	List price	Quantity	Part no.	List price	ship wt. (lbs)
S-5! with L-foot	1	321255	$ 26.75	1	321257	$ 27.00	1
	20	321256	485.00	20	321258	490.00	10

Prices effective March 1, 2007 • Prices and specifications are subject to change without notice.

Start at www.unirac.com

Download our ***SolarMount® Master Price List with Sizing Charts*** and installation manuals. Generate quick price estimates with our on-line ***SolarMount® Estimator***.

Code Compliant

The SolarMount® system is PE certified. Call UniRac for documentation applicable to your building code.

Component Specifications

6105-T5 aluminum extrusion

- SolarMount® rails
- Mounting clips and clamps
- Tilt legs and L-feet
- Two-piece standoffs

Severe Condition 4 (very severe) zinc-plated welded steel

- One-piece standoffs

18-8 stainless steel

- Fasteners

Warranty

SolarMount® is covered by a 10-year limited product warranty and a 5-year limited finish warranty. For complete warranties, download any SolarMount® installation manual from our web site.

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