

THE
ALLMAX^M plus⁺
FRAMED 60-CELL MODULE

60 CELL
MONOCRYSTALLINE MODULE

275-315W
POWER OUTPUT RANGE

19.2%
MAXIMUM EFFICIENCY

0~+5W
POSITIVE POWER TOLERANCE

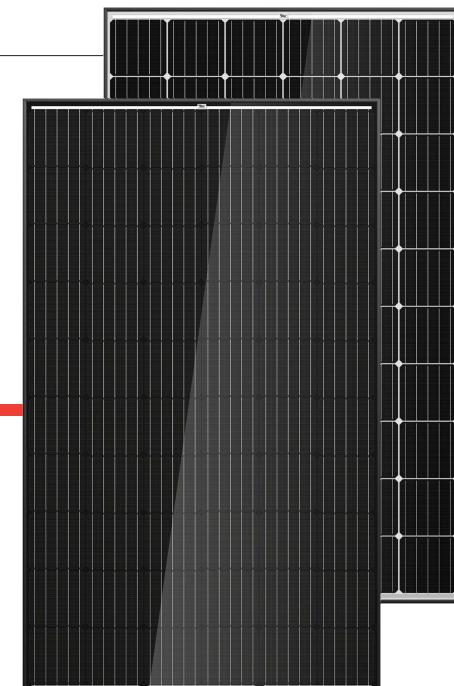
Founded in 1997, Trina Solar is the world's leading comprehensive solutions provider for solar energy, we believe close cooperation with our partners is critical to success. Trina Solar now distributes its PV products to over 60 countries all over the world, Trina is able to provide exceptional service to each customer in each market and supplement our innovative, reliable products with the backing of Trina as a strong, bankable partner. We are committed to building strategic, mutually beneficial collaboration with installers, developers, distributors and other partners.

Comprehensive Products And System Certificates

IEC61215/IEC61730/UL1703/IEC61701/IEC62716
ISO 9001: Quality Management System
ISO14001: Environmental Management System
ISO14064: Greenhouse gases Emissions Verification
OHSAS 18001: Occupation Health and Safety Management System



Trina solar



Maximize limited space with top-end efficiency

- Up to 192W/m² power density
- Low thermal coefficients for greater energy production at high operating temperatures

Highly reliable due to stringent quality control

- Over 30 in-house tests (UV, TC, HF, and many more)
- In-house testing goes well beyond certification requirements
- PID resistant
- 100% EL double inspection
- Selective emitter, advanced surface texturing

Certified to withstand the most challenging environmental conditions

- 2400 Pa wind load
- 5400 Pa snow load
- 35 mm hail stones at 97 km/h

LINEAR PERFORMANCE WARRANTY

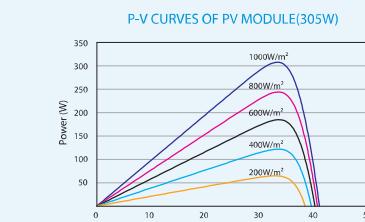
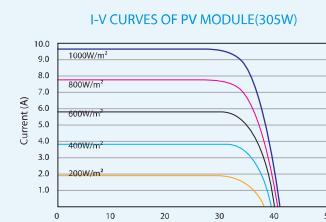
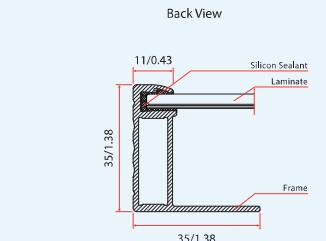
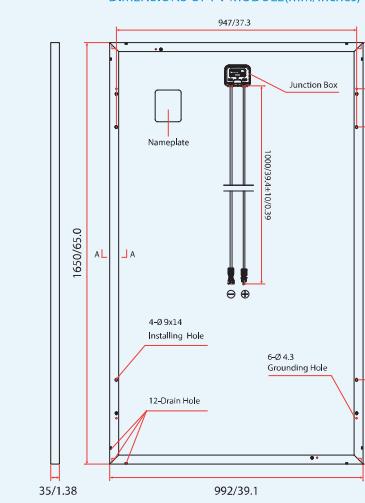


ALLMAX^M plus⁺

FRAMED 60-CELL MODULE

PRODUCTS	POWER RANGE
TSM-DD05A.08(II)	280-315W
TSM-DD05A.05(II)	275-310W

DIMENSIONS OF PV MODULE(mm/inches)



Trina solar

ELECTRICAL DATA (STC)

Peak Power Watts-P _{MAX} (W)*	275	280	285	290	295	300	305	310	315
Power Output Tolerance-P _{MAX} (W)	0 ~ +5								
Maximum Power Voltage-V _{MPP} (V)	31.4	31.7	31.8	32.2	32.5	32.6	32.9	33.1	33.3
Maximum Power Current-I _{MPP} (A)	8.76	8.84	8.97	9.01	9.08	9.19	9.28	9.37	9.46
Open Circuit Voltage-V _{OC} (V)	38.4	38.4	38.5	38.9	39.6	39.8	40.0	40.2	40.5
Short Circuit Current-I _{SC} (A)	9.24	9.42	9.51	9.66	9.68	9.77	9.85	9.94	10.0
Module Efficiency η _η (%)	16.8	17.1	17.4	17.7	18.0	18.3	18.6	18.9	19.2

STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5.

*Measuring tolerance: ±3%.

ELECTRICAL DATA (NOCT)

Maximum Power-P _{MAX} (Wp)	205	209	212	216	220	223	227	231	235
Maximum Power Voltage-V _{MPP} (V)	29.1	29.4	29.5	29.9	30.1	30.2	30.5	30.7	30.9
Maximum Power Current-I _{MPP} (A)	7.04	7.10	7.21	7.24	7.30	7.38	7.46	7.53	7.60
Open Circuit Voltage-V _{OC} (V)	35.7	35.7	35.8	36.2	36.8	37.0	37.2	37.4	37.6
Short Circuit Current-I _{SC} (A)	7.46	7.61	7.68	7.80	7.82	7.89	7.95	8.03	8.10

NOCT: Irradiance at 800W/m², Ambient Temperature 20°C, Wind Speed 1m/s.

MECHANICAL DATA

Solar Cells	Monocrystalline 156.75 × 156.75 mm (6 inches)
Cell Orientation	60 cells (6 × 10)
Module Dimensions	1650 × 992 × 35 mm (65.0 × 39.1 × 1.38 inches)
Weight	18.6 kg (41.0 lb)
Glass	3.2 mm (0.13 inches), High Transmission, AR Coated Tempered Glass
Backsheet	White [DD05A.08(II)]; Black [DD05A.05(II)]
Frame	Black Anodized Aluminium Alloy [DD05A.08(II), DD05A.05(II)]
J-Box	IP 67 or IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm ² (0.006 inches ²), 1000 mm (39.4 inches)
Connector	MC4
Fire Type	Type 1 or Type 2

TEMPERATURE RATINGS

NOCT(Nominal Operating Cell Temperature)	44°C (±2°C)
Temperature Coefficient of P _{MAX}	-0.39%/°C
Temperature Coefficient of V _{OC}	-0.29%/°C
Temperature Coefficient of I _{SC}	0.05%/°C

MAXIMUM RATINGS

Operational Temperature	-40~+85°C
Maximum System Voltage	1000V DC (IEC) 1000V DC (UL)
Max Series Fuse Rating	15A (Power ≤285W) 20A (Power ≥290W)
(DO NOT connect Fuse in Combiner Box with two or more strings in parallel connection)	

WARRANTY

10 year Product Workmanship Warranty

25 year Linear Power Warranty

(Please refer to product warranty for details)

PACKAGING CONFIGURATION

Modules per box: 30 pieces

Modules per 40' container: 840 pieces

CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.

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www.trinasolar.com

Single Phase Inverter with HD-Wave Technology

for North America

SE3000H-US / SE3800H-US / SE5000H-US / SE6000H-US /
SE7600H-US / SE10000H-US / SE11400H-US



12-25
YEAR
WARRANTY

INVERTERS

Optimized installation with HD-Wave technology

- ✓ Specifically designed to work with power optimizers
- ✓ Record-breaking efficiency
- ✓ Fixed voltage inverter for longer strings
- ✓ Integrated arc fault protection and rapid shutdown for NEC 2014 and 2017, per article 690.11 and 690.12
- ✓ UL1741 SA certified, for CPUC Rule 21 grid compliance
- ✓ Extremely small
- ✓ Built-in module-level monitoring
- ✓ Outdoor and indoor installation
- ✓ Optional: Revenue grade data, ANSI C12.20 Class 0.5 (0.5% accuracy)

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/ Single Phase Inverter with HD-Wave Technology for North America

SE3000H-US / SE3800H-US / SE5000H-US / SE6000H-US/
SE7600H-US / SE10000H-US / SE11400H-US

	SE3000H-US	SE3800H-US	SE5000H-US	SE6000H-US	SE7600H-US	SE10000H-US	SE11400H-US			
OUTPUT										
Rated AC Power Output	3000	3800 @ 240V 3300 @ 208V	5000	6000 @ 240V 5000 @ 208V	7600	10000	11400 @ 240V 10000 @ 208V			
Maximum AC Power Output	3000	3800 @ 240V 3300 @ 208V	5000	6000 @ 240V 5000 @ 208V	7600	10000	11400 @ 240V 10000 @ 208V			
AC Output Voltage Min.-Nom.-Max. (211 - 240 - 264)	✓	✓	✓	✓	✓	✓	✓			
AC Output Voltage Min.-Nom.-Max. (183 - 208 - 229)	-	✓	-	✓	-	-	✓			
AC Frequency (Nominal)	59.3 - 60 - 60.5 ⁽¹⁾									
Maximum Continuous Output Current @240V	12.5	16	21	25	32	42	47.5			
Maximum Continuous Output Current @208V	-	16	-	24	-	-	48.5			
GFDI Threshold	1									
Utility Monitoring, Islanding Protection, Country Configurable Thresholds	Yes									
INPUT										
Maximum DC Power @240V	4650	5900	7750	9300	11800	15500	17650			
Maximum DC Power @208V	-	5100	-	7750	-	-	15500			
Transformer-less, Ungrounded	Yes									
Maximum Input Voltage	480									
Nominal DC Input Voltage	380									
Maximum Input Current @240V ⁽²⁾	8.5	10.5	13.5	16.5	20	27	30.5			
Maximum Input Current @208V ⁽²⁾	-	9	-	13.5	-	-	27			
Max. Input Short Circuit Current	45									
Reverse-Polarity Protection	Yes									
Ground-Fault Isolation Detection	600kΩ Sensitivity									
Maximum Inverter Efficiency	99	99.2					%			
CEC Weighted Efficiency	99					99 @ 240V 98.5 @ 208V	%			
Nighttime Power Consumption	< 2.5									
ADDITIONAL FEATURES										
Supported Communication Interfaces	RS485, Ethernet, ZigBee (optional), Cellular (optional)									
Revenue Grade Data, ANSI C12.20	Optional ⁽³⁾									
Rapid Shutdown - NEC 2014 and 2017 690.12	Automatic Rapid Shutdown upon AC Grid Disconnect									
STANDARD COMPLIANCE										
Safety	UL1741, UL1741 SA, UL1699B, CSA C22.2, Canadian AFCI according to T.I.L. M-07									
Grid Connection Standards	IEEE1547, Rule 21, Rule 14 (HI)									
Emissions	FCC Part 15 Class B									
INSTALLATION SPECIFICATIONS										
AC Output Conduit Size / AWG Range	1" Maximum / 14-6 AWG									
DC Input Conduit Size / # of Strings / AWG Range	1" Maximum / 1-2 strings / 14-6 AWG									
Dimensions with Safety Switch (HxWxD)	17.7 x 14.6 x 6.8 / 450 x 370 x 174									
Weight with Safety Switch	22 / 10	25.1 / 11.4	26.2 / 11.9			38.8 / 17.6	lb / kg			
Noise	< 25									
Cooling	Natural Convection									
Operating Temperature Range	-13 to +140 / -25 to +60 ⁽⁴⁾ (-40°F / -40°C option) ⁽⁵⁾									
Protection Rating	NEMA 4X (Inverter with Safety Switch)									

⁽¹⁾ For other regional settings please contact SolarEdge support

⁽²⁾ A higher current source may be used; the inverter will limit its input current to the values stated

⁽³⁾ Revenue grade inverter P/N: SExxxxH-US000INC2

⁽⁴⁾ For power de-rating information refer to: <https://www.solaredge.com/sites/default/files/se-temperature-de-rating-note-na.pdf>

⁽⁵⁾ -40 version P/N: SExxxxH-US000NNNU

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RoHS

Power Optimizer

For North America

P320 / P340 / P370 / P400 / P405 / P505



POWER OPTIMIZER

PV power optimization at the module-level

- Specifically designed to work with SolarEdge inverters
- Up to 25% more energy
- Superior efficiency (99.5%)
- Mitigates all types of module mismatch losses, from manufacturing tolerance to partial shading
- Flexible system design for maximum space utilization
- Fast installation with a single bolt
- Next generation maintenance with module-level monitoring
- Meets NEC requirements for arc fault protection (AFCI) and Photovoltaic Rapid Shutdown System (PVRSS)
- Module-level voltage shutdown for installer and firefighter safety

/ Power Optimizer For North America

P320 / P340 / P370 / P400 / P405 / P505

Optimizer model (typical module compatibility)	P320 (for 60-cell modules)	P340 (for higher-power 60-cell modules)	P370 (for higher-power 60 and 72-cell modules)	P400 (for 72 & 96-cell modules)	P405 (for thin film modules)	P505 (for higher current modules)	
INPUT							
Rated Input DC Power ^①	320	340	370	400	405	505	W
Absolute Maximum Input Voltage (Voc at lowest temperature)		48	60	80	125 ^②	87 ^②	Vdc
MPPT Operating Range	8 - 48	8 - 60	8 - 80	12.5 - 105	12.5 - 87		Vdc
Maximum Short Circuit Current (Isc)		11		10.1	14		Adc
Maximum DC Input Current		13.75		12.5	17.5		Adc
Maximum Efficiency			99.5				%
Weighted Efficiency		98.8		98.6			%
Overvoltage Category		II					
OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING SOLAREDGE INVERTER)							
Maximum Output Current			15				Adc
Maximum Output Voltage		60		85			Vdc
OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM SOLAREDGE INVERTER OR SOLAREDGE INVERTER OFF)							
Safety Output Voltage per Power Optimizer		1 ± 0.1					Vdc
STANDARD COMPLIANCE							
EMC	FCC Part15 Class B, IEC61000-6-2, IEC61000-6-3						
Safety	IEC62109-1 (class II safety), UL1741						
Material	UL94 V-0, UV Resistant						
RoHS	Yes						
INSTALLATION SPECIFICATIONS							
Maximum Allowed System Voltage	1000						
Compatible inverters	All SolarEdge Single Phase and Three Phase inverters						
Dimensions (W x L x H)	129 x 153 x 27.5 / 5.1 x 6 x 1.1		129 x 153 x 33.5 / 5.1 x 6 x 1.3	129 x 159 x 49.5 / 5.1 x 6.3 x 1.9	129 x 162 x 59 / 5.1 x 6.4 x 2.3		mm / in
Weight (including cables)	630 / 1.4		750 / 1.7	845 / 1.9	1064 / 2.3		gr / lb
Input Connector	Single or dual MC4 ^③						
Input Wire Length	0.16 / 0.52						
Output Wire Type / Connector	Double Insulated / MC4						
Output Wire Length	0.9 / 2.95		1.2 / 3.9				m / ft
Operating Temperature Range	-40 - +85 / -40 - +185						
Protection Rating	IP68 / NEMA6P						
Relative Humidity	0 - 100						

^① Rated power of the module at STC will not exceed the optimizer "Rated Input DC Power". Modules with up to +5% power tolerance are allowed.

^② NEC 2017 requires max input voltage be not more than 80V

^③ For other connector types please contact SolarEdge

PV System Design Using a SolarEdge Inverter ^{④⑤}	Single Phase HD-Wave	Single phase	Three Phase 208V	Three Phase 480V	
Minimum String Length (Power Optimizers) P320, P340, P370, P400 P405 / P505		8	10	18	
Maximum String Length (Power Optimizers)		6	13 (12 with SE3K)	14	
Maximum Power per String		25	25	50 ^⑥	
Parallel Strings of Different Lengths or Orientations	5700 (6000 with SE7600-US - SE11400-US)	5250	6000 ^⑦	12750 ^⑧	W

^④ For detailed string sizing information refer to: http://www.solaredge.com/sites/default/files/string_sizing_na.pdf

^⑤ It is not allowed to mix P405/P505 with P320/P340/P370/P400 in one string

^⑥ A string with more than 30 optimizers does not meet NEC rapid shutdown requirements; safety voltage will be above the 30V requirement

^⑦ For SE14.4KUS/SE43.2KUS: It is allowed to install up to 6,500W per string when 3 strings are connected to the inverter (3 strings per unit for SE43.2KUS) and when the maximum power difference between the strings is up to 1,000W

^⑧ For SE30KUS/SE33.3KUS/SE66.6KUS/SE100KUS: It is allowed to install up to 15,000W per string when 3 strings are connected to the inverter (3 strings per unit for SE66.6KUS/SE100KUS) and when the maximum power difference between the strings is up to 2,000W

SOLARMOUNT

UNIRAC

SOLARMOUNT is the professionals' choice for residential PV mounting applications. Every aspect of the system is designed for an easier, faster installation experience. SOLARMOUNT is a complete solution with revolutionary universal clamps, FLASHKIT PRO, full system UL 2703 certification and 25-year warranty. Not only is SOLARMOUNT easy to install, but best-in-class aesthetics make it the most attractive on any block!



New & Improved:

THE PROFESSIONALS' CHOICE

With Superior Aesthetics



NOW FEATURING FLASHKIT PRO

The Complete Roof Attachment Solution

FEATURING EcoFasten Solar® TECHNOLOGY



NOW WITH UNIVERSAL MIDCLAMPS

Accommodates 30mm-51mm module frames
One tool, one-person installs are here!



REVOLUTIONARY NEW ENDCLAMPS

Concealed design and included End Caps

THE PROFESSIONALS' CHOICE FOR RESIDENTIAL RACKING

BEST INSTALLATION EXPERIENCE • CURB APPEAL • COMPLETE SOLUTION • UNIRAC SUPPORT

SOLARMOUNT

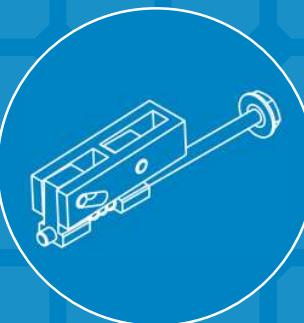
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BETTER DESIGNS

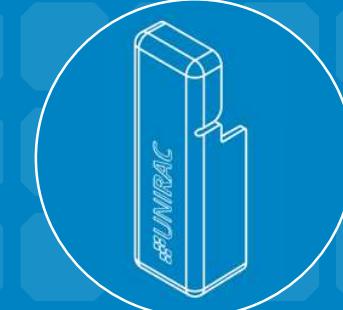
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Start the design process for every project in our U-Builder on-line design tool. It's a great way to save time and money.

CONCEALED UNIVERSAL
ENDCLAMPS



END CAPS INCLUDED
WITH EVERY ENDCLAMP



UNIVERSAL SELF
STANDING MIDCLAMPS



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TOOL SAVES TIME & MONEY
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BETTER SYSTEMS

ONE SYSTEM - MANY APPLICATIONS

Quickly set modules flush to the roof on steep pitched roofs. Orient a large variety of modules in Portrait or Landscape. Tilt the system up on flat or low slope roofs. Components available in mill, clear, and dark finishes to optimize your design financials and aesthetics.

BETTER RESULTS

MAXIMIZE PROFITABILITY ON EVERY JOB

Trust Unirac to help you minimize both system and labor costs from the time the job is quoted to the time your teams get off the roof. Faster installs. Less Waste. More Profits.

BETTER SUPPORT

WORK WITH THE INDUSTRY'S MOST EXPERIENCED TEAM

Professional support for professional installers and designers. You have access to our technical support and training groups. Whatever your support needs, we've got you covered. Visit Unirac.com/solarmount for more information.

LISTED **UL2703**

BONDING & GROUNDING
MECHANICAL LOADING
SYSTEM FIRE CLASSIFICATION

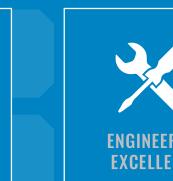
UNIRAC CUSTOMER SERVICE MEANS THE HIGHEST LEVEL OF PRODUCT SUPPORT



UNMATCHED
EXPERIENCE



CERTIFIED
QUALITY



ENGINEERING
EXCELLENCE



BANKABLE
WARRANTY



DESIGN
TOOLS



PERMIT
DOCUMENTATION

TECHNICAL SUPPORT

Unirac's technical support team is dedicated to answering questions & addressing issues in real time. An online library of documents including engineering reports, stamped letters and technical data sheets greatly simplifies your permitting and project planning process.

CERTIFIED QUALITY PROVIDER

Unirac is the only PV mounting vendor with ISO certifications for 9001:2008, 14001:2004 and OHSAS 18001:2007, which means we deliver the highest standards for fit, form, and function. These certifications demonstrate our excellence and commitment to first class business practices.

BANKABLE WARRANTY

Dont leave your project to chance, Unirac has the financial strength to back our products and reduce your risk. Have peace of mind knowing you are providing products of exceptional quality. SOLARMOUNT is covered by a 25 year limited product warranty and a 5 year limited finish warranty.

ENHANCE YOUR REPUTATION WITH QUALITY RACKING SOLUTIONS BACKED BY ENGINEERING EXCELLENCE AND A SUPERIOR SUPPLY CHAIN

PUB2016MAY16 - PRINTED UPDATE

FLASHKIT PRO



FLASHKIT PRO is the complete attachment solution for composition shingle roofs. Featuring Unirac's patented **SHED & SEAL** technology, a weather proof system which provides the ultimate protection against roof leaks. Kitted in 10 packs for maximum convenience, flashings and hardware are available in Mill or Dark finishes. With **FLASHKIT** pro, you have everything you need for a quick, professional installation.



TRUSTED WATER SEAL FLASHINGS
FEATURING SHED & SEAL TECHNOLOGY



YOUR COMPLETE SOLUTION
Flashings, lags, continuous slot L-Feet and hardware



CONVENIENT 10 PACKS
Packaged for speed and ease of handling

FLASHKIT PRO

INSTALLATION GUIDE



FLASHKIT PRO IS THE COMPLETE FLASHING AND ATTACHMENT SOLUTION FOR COMPOSITION ROOFS.



INSTALL FLASHKIT PRO FLASHING



INSTALL L-FOOT



ATTACH L-FOOT TO RAIL

PRE-INSTALL

- Locate roof rafters and snap chalk lines to mark the installation point for each roof attachment.
- Drill a 7/32" pilot hole at each roof attachment. Fill each pilot hole with sealant.

STEP 1 INSTALL FLASHKIT PRO FLASHING

- Add a U-shaped bead of roof sealant to the underside of the flashing with the open side of the U pointing down the roof slope. Slide the aluminum flashing underneath the row of shingles directly up slope from the pilot hole as shown. Align the indicator marks on the lower end of the flashing with the chalk lines on the roof to center the raised hole in the flashing over the pilot hole in the roof. When installed correctly, the flashing will extend under the two courses of shingles above the pilot hole.

STEP 2 INSTALL L-FOOT

- Fasten L-foot and Flashing into place by passing the included lag bolt and pre-installed stainless steel-backed EPDM washer through the L-foot EPDM grommet, and the raised hole in the flashing, into the pilot hole in the roof rafter.

- Drive the lag bolt down until the L-foot is held firmly in place. It is normal for the EPDM on the underside of the stainless steel backed EPDM washer to compress and expand beyond the outside edge of the steel washer when the proper torque is applied.

TIP:

- Use caution to avoid over-torqueing the lag bolt if using an impact driver.
- Repeat Steps 1 and 2 at each roof attachment point.

STEP 3 ATTACH L-FOOT TO RAIL

- Insert the included 3/8"-16 T-bolts into the lower slot on the Rail (sold separately), spacing the bolts to match the spacing between the roof attachments.
- Position the Rail against the L-Foot and insert the threaded end of the T-Bolt through the continuous slot in the L-Foot. Apply anti-seize to bolt threads to prevent galling of the T-bolt and included 3/8" serrated flange nut. Place the 3/8" flange nut on the T-bolt and finger tighten. Repeat STEP 3 until all L-Feet are secured to the Rail with a T-bolt. Adjust the level and height of the Rail and torque each bolt to 30ft-lbs.

THE COMPLETE ROOF ATTACHMENT SOLUTION

FOR QUESTIONS OR CUSTOMER SERVICE VISIT UNIRAC.COM OR CALL (505) 248-2702

FASTER INSTALLATION. 25-YEAR WARRANTY.

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