

ORIGINAL

SPECIAL PERMIT APPLICATION

Planning & Zoning Commission
Easton, Connecticut 06612

Application Number SP-20-01

Location of Property – Street & Number 20 Todds Way Easton, CT 06612

Assessor's Map No. 3773A

Parcel No. 3773A Block 4A Lot14 Unique ID: 282000

Applicant Derick Moorer Owner Daniel Perlicki

Address 80 Clark Dr. East Berlin, CT 06023 Address 20 Todds Way Easton, CT 06612
(forward notice)

Engineer Daniel Dunzik Surveyor _____

Type of Sewage Disposal Septic Type of Water Supply Public

Zoning District R3

Number of Feet of New Road Construction (if required) _____

Wetland: Does this application require a permit from the Inland Wetlands Agency: Yes / NO

Notice: If a wetland permit is required, this application will not be acted upon until the wetland permit is obtained.

This applicant understands that this application is to be considered complete only when all information and maps are submitted in accordance with Section 8400 of the Zoning Regulations of the Town of Easton, Connecticut. Failure to submit a complete application and maps may result in denial of the application by the Commission.

Signature of Record Owner [Signature] 347-324-9836
Telephone

Signature of Applicant [Signature] 475-207-4279
Telephone

Application and Documents Submitted: Date: 3/4/2020

By: [Signature] 3/4/20
For the Commission

APPLICATION
FOR
DETERMINATION OF WETLAND IMPACT

Note: Connecticut General Statutes require that the applicant for a project which involves land regulated as wetland or watercourse shall submit an application to the Town Inland Wetlands & Watercourses Agency, not later than the date of submission of the Zoning application to the Planning and Zoning Commission, to determine the impact of the proposed activity on wetlands and watercourses on or adjacent to the property.

To: Inland Wetlands & Watercourses Agency,
Town of Easton Conservation Commission

Date:

Location of Property: 20 Todds Way Easton, CT 06612

Owner(s) of Record: (Name) Daniel Perlicki

(Address) 20 Todds Way Easton, CT 06612

(Telephone//E-MAIL) 347-324-9836 PermitsCT@momentumsolar.com

Applicant(s): (Name) Derrick Moorer

(Address) 80 Clark Dr. East Berlin, CT 06023

(Telephone/FAX/E-MAIL) 475-207-4279

Title of Zoning Project (Application Must Include Application Form and

Drawings of the Proposed Plans (Daniel Perlicki - Ground Mount. - 20 Todds Way)

A written statement from the Conservation Commission (IWWC) regarding potential wetland/watercourse impacts and the applicability of the Inland Wetlands & Watercourses Regulations to the proposed development must be submitted to the Planning and Zoning Commission for the zoning application to be considered complete.

Special Permit Criteria

- **Zoning Purposes:** The proposed activity of installing a ground mount is indeed consistent with the zoning regulations.
- **Environmental Protection and Conservation:** The ground mount will not be in a historic district. This solar project will be beneficial to the environment and conservation. The solar will create clean, renewable power from the sun and benefit the environment by reducing carbon footprint while reducing greenhouse gases around the globe.
- **Overall Compatibility:** The proposed activity will be beneficial to the overall community and expand further knowledge about renewable energy. Referring back to the environmental protection, the more solar being used as a source of energy, the greater the impact on overall protection of our environment for the future.
- **Suitable Location for Use:** The proposed array will be in compliance with the building inspectors' suggestions to make the array less visible to the public eye. We will be adding tree shrubs around the array to provide natural screening from street view, place a gravel bed beneath the array for the off drip, and send out addressed envelopes for abutting property owners.
- **Appropriate Improvements:** Refer to above section under suitable location for use.
- **Suitable Transportation Conditions:** No issues regarding transportation conditions.
- **Adequate Public Utilities and Services:** Yes, this project is complying with all standards of appropriate regulatory authorities, and will not unduly burden the capacity of such facilities. There should be no issue with water run off due to the nature of the panels being angled downward and having a gap between each panel that will be shown in the pictures.
- **Long Term Viability:** No issues regarding long term viability.
- **Nuisance Avoidance:** No issues regarding nuisance avoidance. The solar panels do not produce light, noise, erosions, water contamination, or disturb the peace and tranquility of nearby properties.
- **Plan of Conservation and Development:** Refer to above section under environmental protection and conservation.
- **Mitigation:** No issues regarding mitigation since the panels don't cause any disturbance to nearby neighbors.

Daniel W. Dunzik

370 Burnt Hill Rd. Skillman NJ. 08558
StudioGdesign@comcast.net

Architect LEED-AP

908-872-3664
March 10, 2020

Re: Proposed Photovoltaic Solar Panel Installation

Daniel Perlicki
20 Todd's Way
Easton, CT 06612

Dear Plan Reviewer:

Certification: I have reviewed the engineering testing reports for the racking and attachments to be used on this project and I certify that the products are capable of supporting the code required loads and are suitable for this installation when installed in strict compliance with the manufacturers printed instructions.

Regarding the solar panel array installation on the above referenced project please note that an inspection was performed by a representative of the Architect/Engineer of Record and we recommend installation of the array in the following manner:

1. The array will be installed in the location as per the Site Plan prepared by the contractor.
2. The system shall consist of photovoltaic modules secured to the "Iron Ridge" ground mounting system. The system will be installed in strict compliance with the manufactureres printed instructions.
3. The layout and attachments are determined by the racking manufacturers specifications for installation in areas with wind speeds in excess of 130 miles per hour, three second gusts. Refer to manufacturers specifications.

Structural Design Loads per ASCE 7-10:

Dead Loads = 10 psf + 2.6 psf (new solar panels) = 12.6 psf; Ground Snow Load = 20 psf

Basic Wind Speed = 130 mph; Exposure = B

Wind Loads per ASCE 7-10, Ch. 30 method 1 & using an area of 10 SF (wind loads from Figure 30.5-1):

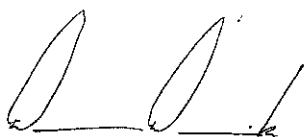
Zone 1 = -27.8 psf; Zone 2 = -48.4 psf; Zone 3 = -71.6 psf Uplift per attachment = 27.8 psf x 10 SF = 278 lbs

Iron Ridge XR Rail: Pull out strength of 5/16" bolt in rail = W' = 526 lbs > 278 lbs OK

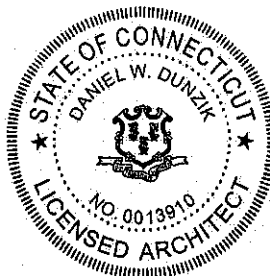
4. Solar modules shall be UL-1703 rated. Refer to manufacturers specifications sheets.

5. All aspects of the installation shall comply with the 2018 Connecticut State Building Code, I.R.C. 2015, 2017 NFPA-70, and all Connecticut state adopted amendments, all county, and local governing laws and ordinances.

If you have any questions relating to this matter, please contact me at your earliest convenience. Thank you.



Daniel W. Dunzik, RA. LEED-AP
CT. Lic No. 0013910



DN: CN = Daniel W
Dunzik C = US O =
Daniel Dunzik Architect
OU = Daniel Dunzik
Architect
Date: 2020.03.10 16:28:
08 -04'00'



momentum
SOLAR

BUILDING/ZONING/ELECTRIC PERMIT LETTER OF AUTHORIZATION

I, Daniel Perlicki BEING DULY SWORN, DEPOSE AND SAY THAT I AM
(Owners Name)

THE OWNER OF THE PREMISES LOCATED AT: 20 Todds Way Easton, CT 06612,
(Address)

AND I AM DESIGNATING: PRO CUSTOM SOLAR dba MOMENTUM SOLAR

TO REPRESENT AND ACT ON MY BEHALF AS MY AGENT, TO SIGN ANY AND ALL

PERMITS AND, TO FILE THE NECESSARY DOCUMENTS TO OBTAIN A BUILDING PERMIT

(S) FOR THE INSTALLATION OF SOLAR PANELS.

(Owner)

powered by
Q.ANTUM DUO

Q.PEAK DUO BLK-G5 300-320

Q.ANTUM SOLAR MODULE

The new Q.PEAK DUO BLK-G5 solar module from Q CELLS impresses with its outstanding visual appearance and particularly high performance on a small surface thanks to the innovative Q.ANTUM DUO Technology. Q.ANTUM's world-record-holding cell concept has now been combined with state-of-the-art circuitry half cells and a six-busbar design, thus achieving outstanding performance under real conditions — both with low-intensity solar radiation as well as on hot, clear summer days.



Q.ANTUM TECHNOLOGY: LOW LEVELIZED COST OF ELECTRICITY

Higher yield per surface area, lower BOS costs, higher power classes, and an efficiency rate of up to 19.3 %.



INNOVATIVE ALL-WEATHER TECHNOLOGY

Optimal yields, whatever the weather with excellent low-light and temperature behavior.



ENDURING HIGH PERFORMANCE

Long-term yield security with Anti LID Technology, Anti PID Technology¹, Hot-Spot Protect and Traceable Quality Tra.Q™.



EXTREME WEATHER RATING

High-tech aluminum alloy frame, certified for high snow (5400 Pa) and wind loads (4000 Pa) regarding IEC.



A RELIABLE INVESTMENT

Inclusive 12-year product warranty and 25-year linear performance guarantee².



STATE OF THE ART MODULE TECHNOLOGY

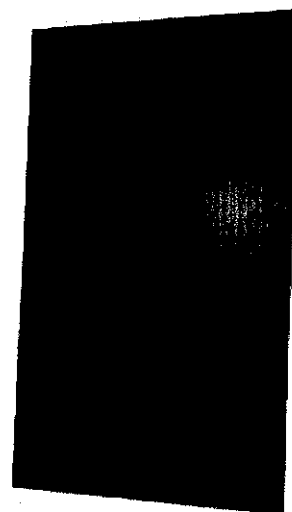
Q.ANTUM DUO combines cutting edge cell separation and innovative wiring with Q.ANTUM Technology.

THE IDEAL SOLUTION FOR:



Rooftop arrays or
residential building

Engineered in Germany



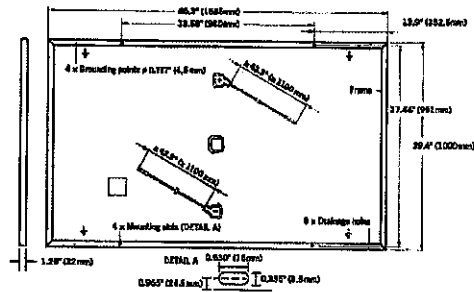
¹ APT test conditions according to IEC/TS 62804-1:2015, method B (-1500V, 168h)

² See data sheet on rear for further information.

Q CELLS

MECHANICAL SPECIFICATION

Format	66.3 in × 39.4 in × 1.26 in (including frame) (1685 mm × 1000 mm × 32 mm)
Weight	41.2 lbs (18.7 kg)
Front Cover	0.13 in (3.2 mm) thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Black anodized aluminum
Cell	6 × 20 monocrystalline Q-ANTUM solar half-cells
Junction box	2.76-3.35 in × 1.97-2.76 in × 0.51-0.83 in (70-85 mm × 50-70 mm × 13-21 mm), decentralized, IP67
Cable	4 mm ² Solar cable; (+) ≥ 43.3 in (1100 mm), (-) ≥ 43.3 in (1100 mm)
Connector	Multi-Contact MC4, IP68

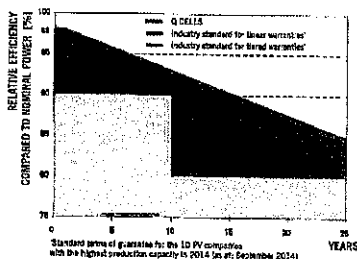


ELECTRICAL CHARACTERISTICS

POWER CLASS			300	305	310	315	320
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC ¹ (POWER TOLERANCE +5W / -0W)							
Minimum	Power at MPP ¹	P _{MPP} [W]	300	305	310	315	320
	Short Circuit Current ¹	I _{sc} [A]	9.72	9.78	9.83	9.89	9.94
	Open Circuit Voltage ¹	V _{oc} [V]	39.48	39.75	40.02	40.29	40.56
	Current at MPP	I _{MPP} [A]	9.25	9.31	9.36	9.41	9.47
	Voltage at MPP	V _{MPP} [V]	32.43	32.78	33.12	33.46	33.80
	Efficiency ¹	η [%]	≥ 17.8	≥ 18.1	≥ 18.4	≥ 18.7	≥ 19.0
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT ²							
Minimum	Power at MPP	P _{MPP} [W]	224.1	227.8	231.6	235.3	239.1
	Short Circuit Current	I _{sc} [A]	7.83	7.88	7.92	7.97	8.01
	Open Circuit Voltage	V _{oc} [V]	37.15	37.40	37.66	37.91	38.17
	Current at MPP	I _{MPP} [A]	7.28	7.32	7.37	7.41	7.45
	Voltage at MPP	V _{MPP} [V]	30.78	31.11	31.44	31.76	32.08
	Efficiency ²	η [%]	≥ 17.8	≥ 18.1	≥ 18.4	≥ 18.7	≥ 19.0

¹Measurement tolerances P_{MPP} ± 3%; I_{sc}, V_{oc} ± 5% at STC: 1000 W/m², 25 ± 2°C, AM 1.5 G according to IEC 60904-3:2006. ²NMOT, spectrum AM 1.5 G

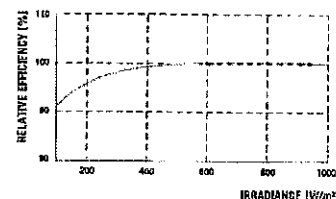
Q CELLS PERFORMANCE WARRANTY



At least 98% of nominal power during first year.
Thereafter max. 0.54% degradation per year.
At least 93.1% of nominal power up to 10 years.
At least 85% of nominal power up to 25 years.

All data within measurement tolerances.
Full warranties in accordance with the warranty terms of the Q CELLS sales organization of your respective country.

PERFORMANCE AT LOW IRRADIANCE



Typical module performance under low irradiance conditions in comparison to STC conditions (25°C, 1000 W/m²).

TEMPERATURE COEFFICIENTS

Temperature Coefficient of I _{sc}	α	[%/K]	+0.04	Temperature Coefficient of V _{oc}	β	[%/K]	-0.28
Temperature Coefficient of P _{MPP}	γ	[%/K]	-0.37	Normal Operating Module Temperature	NMOT	[°F]	109 ± 5.4 (43 ± 3°C)

PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage V _{sys}	[V]	1000 (IEC) / 1000 (UL)	Safety Class	II
Maximum Series Fuse Rating	[A DC]	20	Fire Rating	C (IEC) / TYPE 1 (UL)
Max. Design Load, Push / Pull (UL) ²	[lbs/ft ²]	75 (3600 Pa) / 55 (2667 Pa)	Permitted module temperature on continuous duty	-40°F up to +185°F (-40°C up to +85°C)
Max. Test Load, Push / Pull (UL) ²	[lbs/ft ²]	113 (5400 Pa) / 84 (4000 Pa)	² see installation manual	

QUALIFICATIONS AND CERTIFICATES

UL 1703; VDE Quality Tested; CE-compliant;
IEC 61215:2016; IEC 61730:2016, Application class A



PACKAGING INFORMATION

Number of Modules per Pallet	32
Number of Pallets per 53' Trailer	30
Number of Pallets per 40' High Cube Container	26
Pallet Dimensions (L × W × H)	69.3 in × 45.3 in × 46.9 in (1760 mm × 1150 mm × 1190 mm)
Pallet Weight	1415 lbs (642 kg)

NOTE: Installation instructions must be followed. See the installation and operating manual or contact our technical service department for further information on approved installation and use of this product.

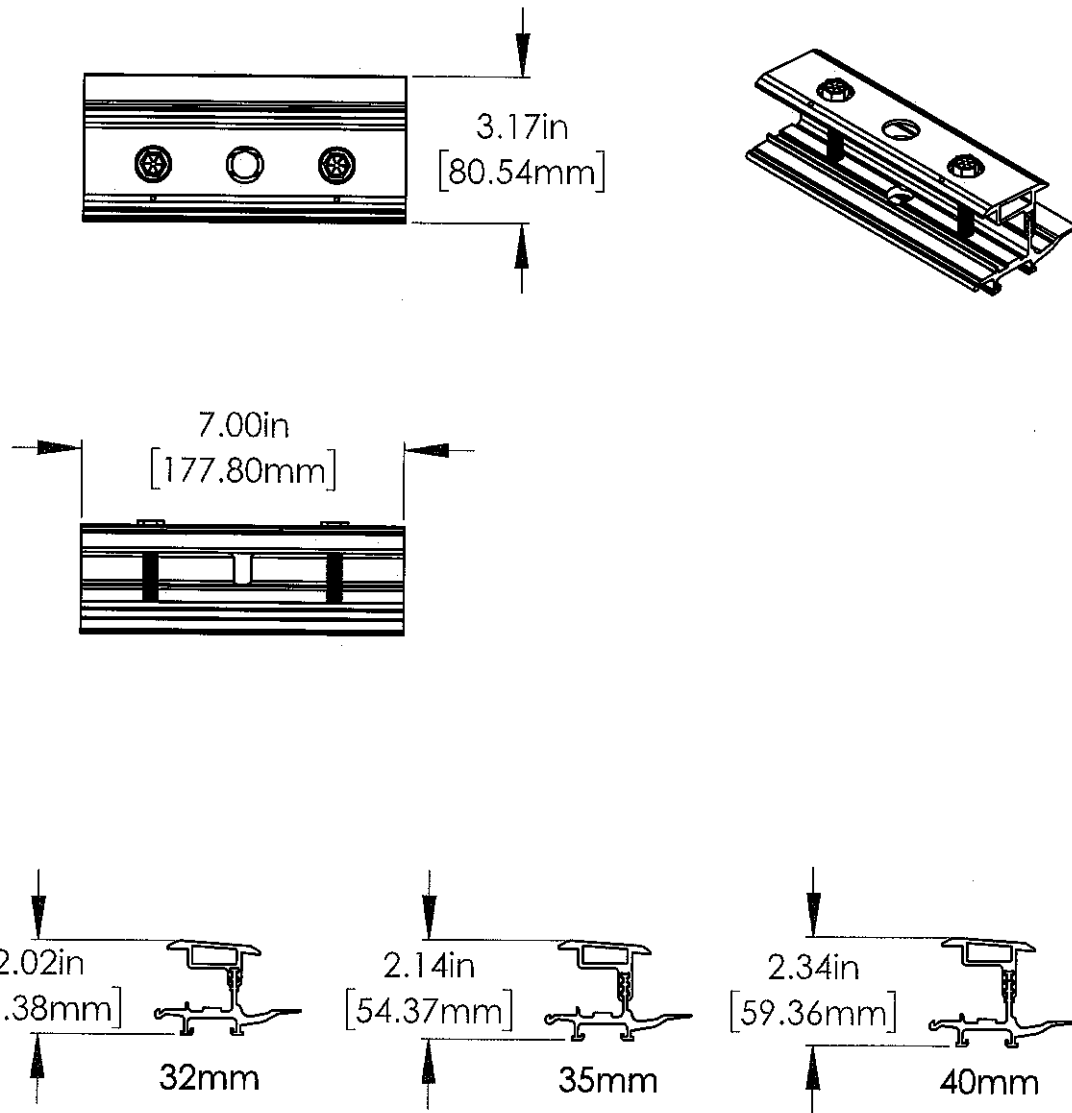
Hanwha Q CELLS America Inc.

300 Spectrum Center Drive, Suite 1250, Irvine, CA 92618, USA | TEL +1 949 748 59 96 | EMAIL inquiry@us.q-cells.com | WEB www.q-cells.us

Specifications subject to technical changes © Hanwha Q CELLS Q-PEAK DUO BLK-65_300-320_2018-03_Rev02_M4

Cut Sheet - Rock-It-4.0-Coupling

1. Installation to be completed in accordance with manufacturer's written specifications and installation instructions.
2. See spec sheet or contact manufacturer for detailed material, finishes, and configuration options.
3. Contact manufacturer for detailed layout.
4. Do not scale drawings.
5. Subject to change without notice.



**ALPINE
SNOWGUARDS**



EcoFasten Solar

Toll Free Phone 1.888.766.4273
Toll Free Fax 1.888.766.9994

Toll Free Phone 1.877.859.3947
Toll Free Fax 1.888.766.9994

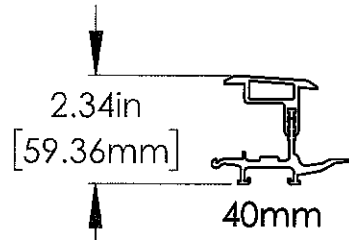
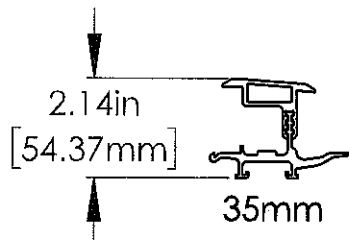
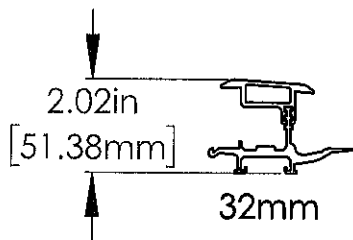
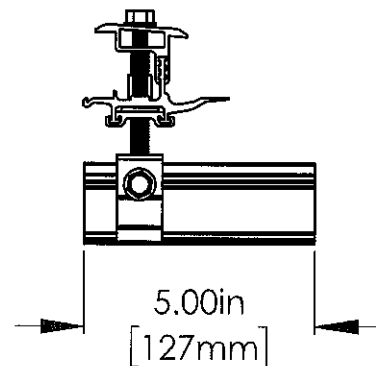
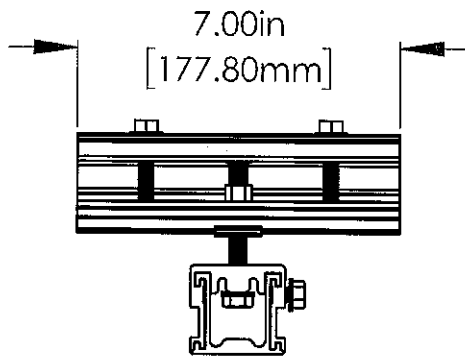
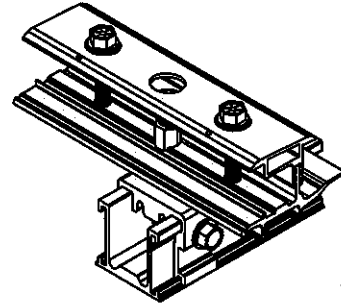
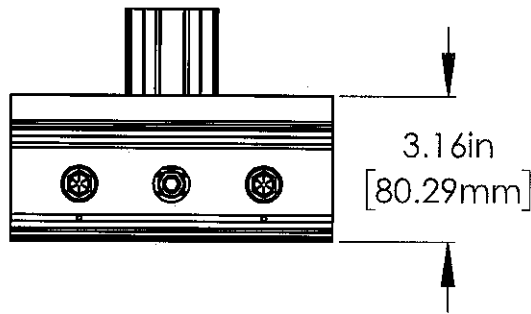
4741 W Polk Stree Ste. 4
Phoenix, AZ 85043

Material: See Spec Sheet

Scale: 1:4 | 6/28/2017 | ASG: - EFS: x

Cut Sheet - Rock-It-4.0-Hybrid Coupling

1. Installation to be completed in accordance with manufacturer's written specifications and installation instructions.
2. See spec sheet or contact manufacturer for detailed material, finishes, and configuration options.
3. Contact manufacturer for detailed layout.
4. Do not scale drawings.
5. Subject to change without notice.



4741 W Polk Street Ste. 4
Phoenix, AZ 85043

Toll Free Phone 1.888.766.4273
Toll Free Fax 1.888.766.9994

Toll Free Phone 1.877.859.3947
Toll Free Fax 1.888.766.9994

Material: See Spec Sheet

Scale: 1:1 | 6/28/2017 | ASG: - | EFS: x

ROCK-IT SYSTEM 4.0

SYSTEM SPECIFICATIONS

Max No. of Panels	300 Modules per ground lug	Materials	300 Series Stainless, 6000 Series Aluminum
Max System Voltage	1000VDC	Coating	Black Andodization/Mill Finish
Class A Fire Rating	With UL1703 Type 1 Rated Modules, see note below.	Lug Specifications	Burndy CL50-1TN Ground Lug (UL Listing #KDER E9999)
Leveling Range	3-4"	Ground Wire Per above Lug spec.	14 AWG- 4 AWG Copper Ground Wire
Rock-It Slide Comp Range Rock-It Slide Tile	3" 7"	Max Module Size	64.96"(1650mm) x 39.05"(992mm) x 2"(50mm)
Min/Max Roof Slope	1/2:12/12:12	Max Downforce/Uplift Rating	45 PSF
Max Anchor Spacing (35mm/40mm) Max Anchor Spacing (32mm)	72" 48"	Rock-It Mount Load Rating	547lbs with Single 5/16" Lag 3.0 Safety Factor
Skirt Box QTY	6 units	Slide Fastening Hole	5/16" diameter
Mount Box QTY Rock-It Slide Box QTY	12 units 50 units	Module Cantilever	Maximum cantilever is 1/3 bracket spacing
Coupling Box QTY	12 units	Warranty	20 Year Material and Workman- ship

Codes: National Electric Code, ANSI/NFPA 70, NEC 250, NEC 690, IRC, IBC

Standards: UL 2703: First Edition, UL 1703



The EcoFasten Solar Rock-It System is a rooftop PV racking system consisting of 6000 Series Aluminum and 300 Series Stainless Steel components. The Rock-It System includes the rack components but does not include the PV panels, inverters or electrical components. The PV modules to be used with Rock-It shall be certified under UL 1703. The system shall be used on steep slope roofs mounted over a Class A fire rated roofing material and attached to the roof structure using 5/16" diameter, minimum 4" long 300 series Stainless Steel lag bolts with minimum thread embedment depth of 2 1/2" into the roof structure.

Periodic re-inspection for loose components

The system is subject to re-inspection as required by the PV module manufacturer or by the Authority Having Jurisdiction. Re-inspection, as required, should include evaluation of any loose components or loose fasteners. All loose components and fasteners should be secured in accordance with these instructions. The system should also be evaluated for any evidence of corrosion. Any corrosion should be removed. Any affected part should be cleaned or replaced in accordance with these instructions.



Features

- New and improved design
- Fastest, easiest to level system on the market
- Integrated electrical bonding
- SIMPLE- only 4 components
- North-South adjustability
- Only one tool required (1/2" deep well socket)
- Vertical adjustment of 3"-4"

EVALUATED, COMPATIBLE MODULES

Module Manufacturer	Model Type ("x" used to indicate variable test)	Module Dimensions (mm)	Module Dimensions (in)	Downward Pressure Design Load (psf)	Upward Pressure Design Load (psf)	Down-slope Design Load (psf)	Maximum Clamp Spacing (in)
Trina Solar	TSM-xxx-Px05.08	1640 x 992 x 40	64.95"x39.05"x1.57"	33.3	33.3	20	72
Canadian Solar	CS6P-xxxM	1638 x 922 x 40	64.48"x36.66"x1.57"	33.3	33.3	20	72
Canadian Solar	CS6P-xxxP	1638 x 982 x 40	64.5"x38.7"x1.57"	33.3	33.3	20	72
Jinko Solar	JKMxxxP-60	1650 x 992 x 40	64.96"x39.05"x1.57"	30	30	20	72
Jinko Solar	JKMxxxM-60	1650 x 992 x 40	64.96"x39.05"x1.57"	30	30	20	72
Jinko Solar	JKMxxxPP-60	1650 x 992 x 40	64.96"x39.05"x1.57"	30	30	20	72
Jinko Solar	JKMxxxMM-60	1650 x 992 x 40	64.96"x39.05"x1.57"	30	30	20	72
Yingli Solar	YL2xxP-29b	1650 x 990 x 40	64.96"x38.97"x1.57"	30	30	20	72
LG Elcetronics	LG300N1C-B3	1640 x 1000 x 35	64.57"x39.37"x1.38"	30	30	20	72
LG Elcetronics	LG300N1K-G4	1640 x 1000 x 40	64.57"x39.37"x1.57"	30	30	20	72
Axitec Solar	AC-xxxM/156-60S	1640 x 992 x 40	64.5"x39.06"x1.38"	30	30	20	48
RECOM	RCM-2xx-6MB	1640 x 992 x 35	64.56"x39.05"x1.37"	30	30	20	72
Silfab	SLA2xxP	1650 x 990 x 38	64.96"x38.97"x1.49"	30	30	20	72
Solaria	PowerXT xxxR-BX	1621 x 1056 x 40	63.89"x41.58"x1.57"	30	30	20	48
Hanwha - Q Cells*	Q.PRO G4 2xx	1670 x 1000 x 32	65.75"x39.37"x1.25"	30	30	20	48
Hanwha - Q Cells*	Q.PRO G4 2xx	1670 x 1000 x 32	65.75"x39.37"x1.25"	30	30	20	72
Sunpreme	GxB-3xx T	1670 x 997 x 40	65.75"x39.25"x1.57"	30	30	20	48
REC	REC-xxx-6MB	1675 x 997 x 38	65.94"x39.25"x1.5"	20	20	20	72
REC	REC-xxx-6MB	1675 x 997 x 38	65.94"x39.25"x1.5"	30	30	20	48
SolarWorld	SW xxx Mono Black	1675 x 961 x 33	65.95"x37.8"x1.30"	20	20	20	72
SolarWorld	SW xxx Mono Black	1675 x 961 x 33	65.95"x37.8"x1.30"	30	30	20	48

*Hanwha Q- Cells 32mm modules to be used with special order Rock-It System components. Call for details.

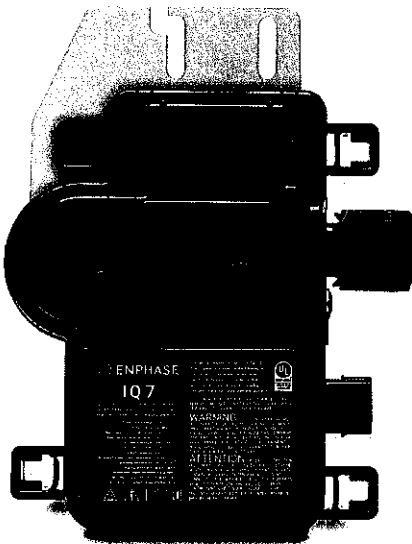


Enphase IQ 7 and IQ 7+ Microinverters

The high-powered smart grid-ready **Enphase IQ 7 Micro™** and **Enphase IQ 7+ Micro™** dramatically simplify the installation process while achieving the highest system efficiency.

Part of the Enphase IQ System, the IQ 7 and IQ 7+ Microinverters integrate with the Enphase IQ Envoy™, Enphase IQ Battery™, and the Enphase Enlighten™ monitoring and analysis software.

IQ Series Microinverters extend the reliability standards set forth by previous generations and undergo over a million hours of power-on testing, enabling Enphase to provide an industry-leading warranty of up to 25 years.



Easy to Install

- Lightweight and simple
- Faster installation with improved, lighter two-wire cabling
- Built-in rapid shutdown compliant (NEC 2014 & 2017)

Productive and Reliable

- Optimized for high powered 60-cell and 72-cell* modules
- More than a million hours of testing
- Class II double-insulated enclosure
- UL listed

Smart Grid Ready

- Complies with advanced grid support, voltage and frequency ride-through requirements
- Remotely updates to respond to changing grid requirements
- Configurable for varying grid profiles
- Meets CA Rule 21 (UL 1741-SA)

* The IQ 7+ Micro is required to support 72-cell modules.



To learn more about Enphase offerings, visit enphase.com



Enphase IQ 7 and IQ 7+ Microinverters

INPUT DATA (DC)		IQ7-60-2-US / IQ7-60-B-US		IQ7PLUS-72-2-US / IQ7PLUS-72-B-US	
Commonly used module pairings ¹		235 W - 350 W +		235 W - 440 W +	
Module compatibility		60-cell PV modules only		60-cell and 72-cell PV modules	
Maximum input DC voltage		48 V		60 V	
Peak power tracking voltage		27 V - 37 V		27 V - 45 V	
Operating range		16 V - 48 V		16 V - 60 V	
Min/Max start voltage		22 V / 48 V		22 V / 60 V	
Max DC short circuit current (module Isc)		15 A		15 A	
Overvoltage class DC port		II		II	
DC port backfeed current		0 A		0 A	
PV array configuration		1 x 1 ungrounded array; No additional DC side protection required; AC side protection requires max 20A per branch circuit			
OUTPUT DATA (AC)		IQ 7 Microinverter		IQ 7+ Microinverter	
Peak output power		250 VA		295 VA	
Maximum continuous output power		240 VA		290 VA	
Nominal (L-L) voltage/range ²		240 V / 211-264 V	208 V / 183-229 V	240 V / 211-264 V	208 V / 183-229 V
Maximum continuous output current		1.0 A (240 V)	1.15 A (208 V)	1.21 A (240 V)	1.39 A (208 V)
Nominal frequency		60 Hz		60 Hz	
Extended frequency range		47 - 68 Hz		47 - 68 Hz	
AC short circuit fault current over 3 cycles		5.8 Arms		5.8 Arms	
Maximum units per 20 A (L-L) branch circuit ³		16 (240 VAC)	13 (208 VAC)	13 (240 VAC)	11 (208 VAC)
Overvoltage class AC port		III		III	
AC port backfeed current		0 A		0 A	
Power factor setting		1.0		1.0	
Power factor (adjustable)		0.7 leading ... 0.7 lagging		0.7 leading ... 0.7 lagging	
EFFICIENCY		@240 V	@208 V	@240 V	@208 V
Peak CEC efficiency		97.6 %	97.6 %	97.5 %	97.3 %
CEC weighted efficiency		97.0 %	97.0 %	97.0 %	97.0 %
MECHANICAL DATA					
Ambient temperature range		-40°C to +65°C			
Relative humidity range		4% to 100% (condensing)			
Connector type (IQ7-60-2-US & IQ7PLUS-72-2-US)		MC4 (or Amphenol H4 UTX with additional Q-DCC-5 adapter)			
Connector type (IQ7-60-B-US & IQ7PLUS-72-B-US)		Friends PV2 (MC4 intermateable). Adaptors for modules with MC4 or UTX connectors: - PV2 to MC4: order ECA-S20-S22 - PV2 to UTX: order ECA-S20-S25			
Dimensions (WxHxD)		212 mm x 175 mm x 30.2 mm (without bracket)			
Weight		1.08 kg (2.38 lbs)			
Cooling		Natural convection - No fans			
Approved for wet locations		Yes			
Pollution degree		PD3			
Enclosure		Class II double-insulated, corrosion resistant polymeric enclosure			
Environmental category / UV exposure rating		NEMA Type 6 / outdoor			
FEATURES					
Communication		Power Line Communication (PLC)			
Monitoring		Enlighten Manager and MyEnlighten monitoring options. Both options require installation of an Enphase IQ Envoy.			
Disconnecting means		The AC and DC connectors have been evaluated and approved by UL for use as the load-break disconnect required by NEC 690.			
Compliance		CA Rule 21 (UL 1741-SA) UL 62109-1, UL1741/IEEE1547, FCC Part 15 Class B, ICES-0003 Class B, CAN/CSA-C22.2 NO. 107.1-01 This product is UL Listed as PV Rapid Shut Down Equipment and conforms with NEC-2014 and NEC-2017 section 690.12 and C22.1-2015 Rule 64-218 Rapid Shutdown of PV Systems, for AC and DC conductors, when installed according manufacturer's instructions.			

1. No enforced DC/AC ratio. See the compatibility calculator at <https://enphase.com/en-us/support/module-compatibility>.

2. Nominal voltage range can be extended beyond nominal if required by the utility.

3. Limits may vary. Refer to local requirements to define the number of microinverters per branch in your area.

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