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## QIMS.E336116

### Mounting Systems, Mounting Devices, Clamping Devices and Ground Lugs for Use with Photovoltaic Modules and Panels

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### Mounting Systems, Mounting Devices, Clamping Devices and Ground Lugs for Use with Photovoltaic Modules and Panels

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**METAL ROOF INNOVATIONS LTD**

E336116

8655 TABLE BUTTE RD

COLORADO SPRINGS, CO 80908-1224 USA

Cat. No.	Investigated for Bonding	Investigated for Mechanical Loading	Tested in Combination With
<b>Photovoltaic clamp</b>			
S-5! PV KIT with the following roof clamps: S-5-U Mini, S-5-S Mini, S-5-T Mini, S-5-Z Mini, S-5-N Mini	Y1	Y2	UL Listed PV Modules; Canadian Solar Inc: CS6P-260P, CS6P-255P, CS6P-250P, CS6P-245P, CS6P-240P, CS6P-235P, CS6P-230P, CS6P-225P, CS6P-220P, CS6P-215P, CS6P-210P, CS6P-205P, CS6P-200P, CS6P-195P, CS6P-190P, CS6P-185P, CS6P-180P, CS6P-175PCS6P-210PE, CS6P-205PE, CS6P-200PE, CS6P-195PE, CS6P-190PE, CS6P-185PE, CS6P-180PE, CS6P-175PE, CS6P-170PE, CS6P-165PE, CS6P-205PE, CS6P-200PE, CS6P-195PE, CS6P-190PE, CS6P-185PE, CS6P-180PE, CS6P-175PE Listed Yingli Energy (China) Co Ltd: YL235P-35b, YL240P-35b, YL245P-35b, YL250P-35b, YL255P-35b, YL260P-35b, YL265P-35b, YL270P-35b, YL275P-35b, YL280P-35b, YL285P-35b, YL220P-32b, YL225P-32b, YL230P-32b, YL235P-32b, YL240P-32b, YL245P-32b, YL250P-32b, YL255P-32b, YL260P-32b, YL265P-32b,

			<p>YL200P-29b, YL205P-29b, YL210P-29b, YL215P-29b, YL220P-29b, YL225P-29b, YL230P-29b, YL235P-29b, YL240P-29b, YL180P-26b, YL185P-26b, YL190P-26b, YL195P-26b, YL200P-26b, YL205P-26b, YL210P-26b, YL215P-26b, YL150P-23b, YL155P-23b, YL160P-23b, YL165P-23b, YL170P-23b, YL175P-23b, YL180P-23b, YL185P-23b, YL150P-23b/2, YL155P-23b/2, YL160P-23b/2, YL165P-23b/2, YL170P-23b/2, YL175P-23b/2, YL180P-23b/2, YL185P-23b/2 Listed Yingli Green Energy Holding Co Ltd: YL235P-35b, YL240P-35b, YL245P-35b, YL250P-35b, YL255P-35b, YL260P-35b, YL265P-35b, YL270P-35b, YL275P-35b, YL280P-35b, YL285P-35b, YL220P-32b, YL225P-32b, YL230P-32b, YL235P-32b, YL240P-32b, YL245P-32b, YL250P-32b, YL255P-32b, YL260P-32b, YL265P-32b, YL200P-29b, YL205P-29b, YL210P-29b, YL215P-29b, YL220P-29b, YL225P-29b, YL230P-29b, YL235P-29b, YL240P-29b, YL180P-26b, YL185P-26b, YL190P-26b, YL195P-26b, YL200P-26b, YL205P-26b, YL210P-26b, YL215P-26b, YL150P-23b, YL155P-23b, YL160P-23b, YL165P-23b, YL170P-23b, YL175P-23b, YL180P-23b, YL185P-23b, YL150P-23b/2, YL155P-23b/2, YL160P-23b/2, YL165P-23b/2, YL170P-23b/2, YL175P-23b/2, YL180P-23b/2, YL185P-23b/2.</p>
<p>S-5! PV KIT With the following roof clamp: S-5-U Mini, S-5-S Mini, S-5-T Mini, S-5-Z Mini, S-5-N Mini, S-5-E Mini</p>	<p>Y1</p>	<p>Y2</p>	<p>UL Listed Trina Solar LTD (+): TSM-205PA05, TSM-210PA05, TSM-215PA05, TSM-220PA05, TSM-225PA05, TSM-230PA05, TSM-235PA05, TSM-240PA05, TSM-245PA05, TSM-250PA05, TSM-255PA05, TSM-260PA05. TSM-205PA05.05, TSM-210PA05.05, TSM-215PA05.05, TSM-220PA05.05, TSM-225PA05.05, TSM-230PA05.05, TSM-235PA05.05, TSM-240PA05.05, TSM-245PA05.05, TSM-250PA05.05, TSM-255PA05.05, TSM-260PA05.05. TSM-205PA05.08, TSM-210PA05.08, TSM-215PA05.08, TSM-220PA05.08, TSM-225PA05.08, TSM-230PA05.08, TSM-235PA05.08, TSM-240PA05.08, TSM-245PA05.08, TSM-250PA05.08, TSM-255PA05.08, TSM-260PA05.08. TSM-250PA14, TSM-255PA14, TSM-260PA14, TSM-265PA14, TSM-270PA14, TSM-275PA14, TSM-280PA14, TSM-285PA14, TSM-290PA14, TSM-295PA14, TSM-300PA14, TSM-305PA14, TSM-310PA14.</p>

			<p>TSM-250PA14.08, TSM-255PA14.08, TSM-260PA14.08, TSM-265PA14.08, TSM-270PA14.08, TSM-275PA14.08, TSM-280PA14.08, TSM-285PA14.08, TSM-290PA14.08, TSM-295PA14.08, TSM-300PA14.08, TSM-305PA14.08, TSM-310PA14.08.</p> <p>(+) - All Trina models above may be provided with frames of cross sectional dimensions 40 x 35 mm or 40 x 40 mm.</p>
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<sup>1</sup> Bonding has been evaluated between modules. Bonding has not been evaluated between the S-5! PV KIT and the metal roof.

<sup>2</sup> The clamps above were secured to the following metal (steel) roof type during the mechanical load test.

S-5-U Mini:

Metal thickness = 0.028 inches (0.7 mm),

Seam Width = 0.625 inches (1.6 cm),

Seam Height = 1.75 inches (44.5 cm),

3 inch Trap single fold, 24 Gauge steel,

3 inch trap double fold, 24 Gauge steel,

2 inch single fold, 24 Gauge steel,

2 inch double fold, 24 Gauge steel

S-5-Z Mini:

2-1/2 inch bulb, 24 Gauge steel

S-5-S Mini:

1-3/4 inch snap-lock, 24 Gauge steel

S-5-T Mini:

2-3/4 inch T panel, 24 Gauge steel

S-5-N Mini:

1 inch nail strip, 24 Gauge steel

S-5-E Mini:

1/4 inch wide x 3/4 inch high Double folded seam, 24 Gauge steel

Trademark and/or Tradename: "S-5!", "S-5", .

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