

N-TYPE MONO CRYSTALLINE HALF CUT MODULE - BACK CONTACT TECHNOLOGY

640 / 645 / 650 / 655 / 660 / 665 / 670 Watts

BLACK TIGER SERIES

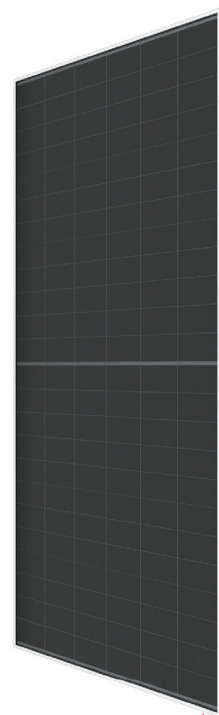


Overview

Black Tiger modules provide numerous benefits to customers seeking a high-quality product with exceptional performance and aesthetic, captivating design. The "Black Tiger" module utilizes N-Type cell technology in conjunction with a rear connection method known as BackContact. As a result, there is 0% front grid shadow loss, which increases the PV module's yield. Due to reduced shading on the front of the cell, the module maximizes total cell area realizing higher efficiency and resulting in a fast return on investment.

Key Benefits

	Zero Light Induced Degradation		25 Years Limited Product Warranty
	0% Front Grid Shading Loss		Low Pmax Temperature Coefficient
	Low LCOE		Reduced dust accumulation impact, improving power generation



ANTI-DUST FRAME DESIGN



Guaranteed mechanical resistance to severe weather conditions



Positive Tolerance

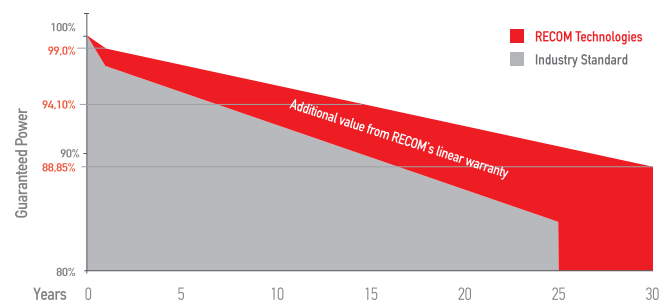


100 % electro-luminescence tested

Tests, Certifications and Warranties

Standard Tests	IEC 61215, IEC 61730
Factory Quality Tests	ISO 9001: 2015, ISO 14001: 2015
Certifications	Conformity to CE, PV CYCLE Fire safety Class C according to UL790
Wind and Snow Static Loads	Module certified to withstand extreme wind (2400 Pascal) and snow loads (5400 Pascal)
Withstanding Hail	Maximum Diameter of 25 mm with impact speed of 23 m/s
Power Tolerance	Guaranteed +0/+5W (STC condition)
Warranties	<ul style="list-style-type: none"> 25-year limited product warranty 15-year manufacturer warranty on 94,10% of the nominal performance 30-year transferable linear power output warranty

Linear Performance Warranty



First Year Output	≥ 99.0%	2-30 Year Decline	≤ 0.35%	30 Year Output	≥ 88,85%
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Black Tiger

N-TYPE MONO CRYSTALLINE HALF CUT MODULE - BACK CONTACT TECHNOLOGY

RCM-xxx-7RCF (xxx=640-670)

Electrical Characteristics

POWER CLASS ⁽¹⁾			640		645		650		655		660		665		670	
Testing Condition			STC ⁽²⁾		NMOT ⁽³⁾		STC		NMOT		STC		NMOT		STC	
Maximum Power	Pmax	[Wp]	640	487	645	491	650	495	655	499	660	502	665	506	670	510
Maximum Power Voltage	Vmp	[V]	44,36	42,15	44,46	42,25	44,56	42,35	44,66	42,44	44,76	42,54	44,86	42,63	44,96	42,73
Maximum Power Current	Imp	[A]	14,43	11,56	14,51	11,63	14,59	11,69	14,67	11,76	14,75	11,82	14,83	11,88	14,91	11,94
Open Circuit Voltage	Voc	[V]	53,70	51,04	53,80	51,13	53,90	51,23	54,00	51,32	54,10	51,42	54,20	51,51	54,30	51,61
Short Circuit Current	Isc	[A]	15,13	12,15	15,21	12,22	15,29	12,28	15,37	12,34	15,45	12,41	15,52	12,47	15,69	12,53
Module Efficiency	Eff	[%]	23,7		23,9		24,1		24,2		24,4		24,6		24,8	
Maximum Series Fuse	IR	[A]	25													
Maximum System Voltage	VSYS	[V]	1500V DC (IEC)													

(1) Measurement Tolerances: Isc & Voc (± 3%) - Power Classification 0/+5W

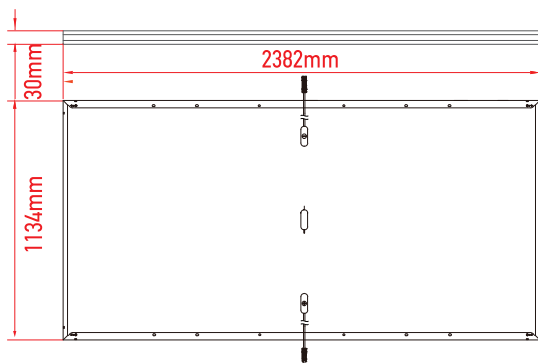
(2) STC (Standard Testing Condition): Irradiance 1000W/m², Cell Temperature 25°C, AM 1.5

(3) NMOT (Nominal Operating Module Temperature): Irradiance 800W/m², NMOT, Ambient Temperature 20°C, AM 1.5, Wind Speed 1m/s

Mechanical Data

Dimensions	2382 mm x 1134 mm x 30 mm
Weight	28,5 Kg
Cell Type	RC-N-type - 144 (2 x 72 Pcs) - M10
Front Glass	3.2 mm Tempered and low iron glass + ARC
Rear Side	Anti-aging Film
Frame	Anodized Aluminium Alloy
Junction Box	IP68, 3 Bypass diodes
Connector	MC4 compatible
Output cable	4mm² - Length: 1400 mm

Dimensions



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Temperature Characteristics

Pmax Temperature Coefficient	-0.260% / °C
Voc Temperature Coefficient	-0.200% / °C
Isc Temperature Coefficient	+0.050% / °C
Operating Temperature	-40~+85 °C
Nominal Operating Module Temperature (NMOT)	45 ± 2 °C

Packing Configuration

Container	40'HC
Pieces per Pallet	35
Pallets per Container	20
Pieces per Container	(35+35)x10=700 pcs

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