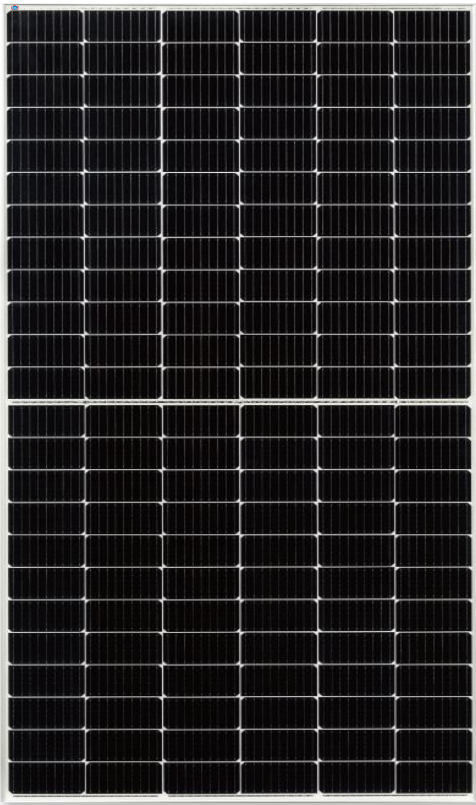


## R440M / R445M / R450M



**20.64%**

MAXIMUM EFFICIENCY



### Raaj Solar

RAAJ Solar, established in the year 2010 in Gujarat which is one of the leading Solar Photovoltaic Module Manufacturer with strong customer base PAN India. We have set up an **Fully Automated Manufacturing unit** in Chandarda with an annual Production capacity of **150 MW**, using state-of-the-art technology, for higher Quality & Efficiency.

We offer DCR and NON DCR Multi-crystalline PV modules Rating from 15Wp to 335Wp and MONO PERC rating from 430Wp to 550Wp as Per MNRE approved guideline.

Assembled with high efficiency multi busbar PERC cells, half cell module configuration offer the Advantages of higher Power output, Perform Better in low light & temperature dependent performance, Lower risk of hot spot with accentuated tolerance for mechanical loading.

### Certification



Solar Division



Superior Manufacturing Technology Design



In House Quality Checks



High Performance under low light condition



Anti Reflective Coated Glass



9 BB Cell



PID Resistance



Positive Power Tolerance



Test Performs : IR, Hipot & Ground Mounted



PAN India Presence



Sales & Service Support

## Electrical Characteristics

	R440M	R445M	R450M
Maximum Power at STC (Pmax)			
Optimum Operating Voltage (Vmp)	40.83	41.06	41.28
Optimum Operating Current (Imp)	10.79	10.85	10.91
Open Circuit Voltage (Voc)	48.98	49.15	49.31
Short Circuit Current (Isc)	11.36	11.42	11.49
Module Efficiency (%)	20.18	20.41	20.64
Cell Type & No. of Cells	MONO PERC 144 Half Cut Cells (72x2)		

Note: (irradiances of 1000 W/m<sup>2</sup>, spectrum AM 1.5 and cell temperature of 25°C)

## Mechanical Characteristics

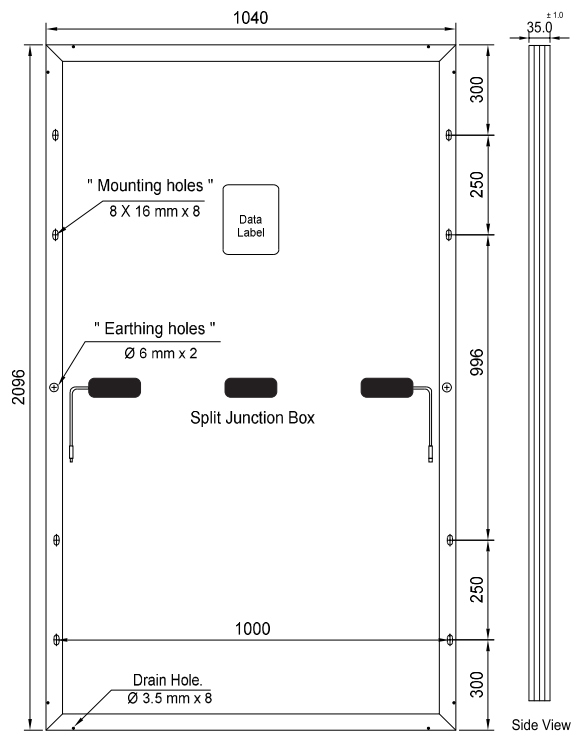
Glass	3.2 mm Thickness, Tempered glass
Frame	Anodized aluminium alloy
Junction Box	3 splits, IP 68 rated
Output Cables & Connectors	4.0 mm <sup>2</sup> with MC4 connectors
Operating Module Temperature	-40 °C to +85 °C
Maximum System Voltage	1500 V DC
Maximum Series Fuse Rating	20 A
Power Tolerance	0/+5 W
Mechanical Load	5400 Pa for snow load & 2400 Pa wind load
Module size	2096 x 1040 x 35 mm
Module weight	24 Kg

## Mono Temperature Characteristics

Temperature Coefficient of Pmax	-0.35%/°C
Temperature Coefficient of Voc	-0.27%/°C
Temperature Coefficient of Isc	+0.05%/°C

## Reliable Quality

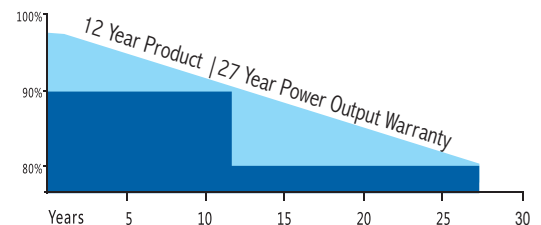
- High Energy Yield on field performance
- Anti - reflective surface to reduce power loss
- 100% EL inspection ensure modules are defect free
- Application class C, Safety Class II
- ISO 9001:2015, ISO14001:2015, ISO 45001:2018 Certified
- BIS/IS 14286 : 2010 / IEC 61215 : 2005
- IS/IEC 61730 (Part I) : 2004 & IS/IEC 61730 (Part II) : 2004
- UL Certified IEC 61701 & IEC 61853-1



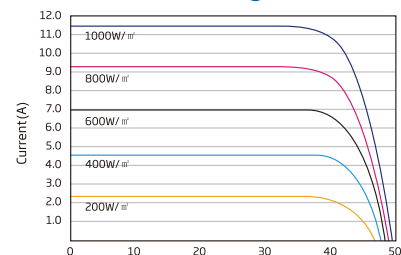
## Superior Warranty

- 12 Year Product Warranty
- 27 Year Linear Power Output Warranty

## Linear Performance



## Current Voltage Curve



  
**Raajratna** Ventures Ltd.

AN ISO 9001:2015 Certified Company

**Manufacturer & Exporter of Solar PV Modules**

**OFFICE :**  
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 Navrangpura, Ahmedabad - 380009, Gujarat, India ☎ +91-79-2756 1915/16/17/18

**WORKS :**  
 Survey No. 69/2, Village : Chandarda, Opp. Madhu Textile, Ahmedabad-Mehsana Highway, Taluka : Kadi, Dist. : Mehsana, Gujarat, India

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