



Phone: +91-90484 44117
www.kumarandcompany.com
kumarandcompany.kerala@gmail.com

KUMAR AND COMPANY

A Symbol of Trust, Technology, and Top Performance

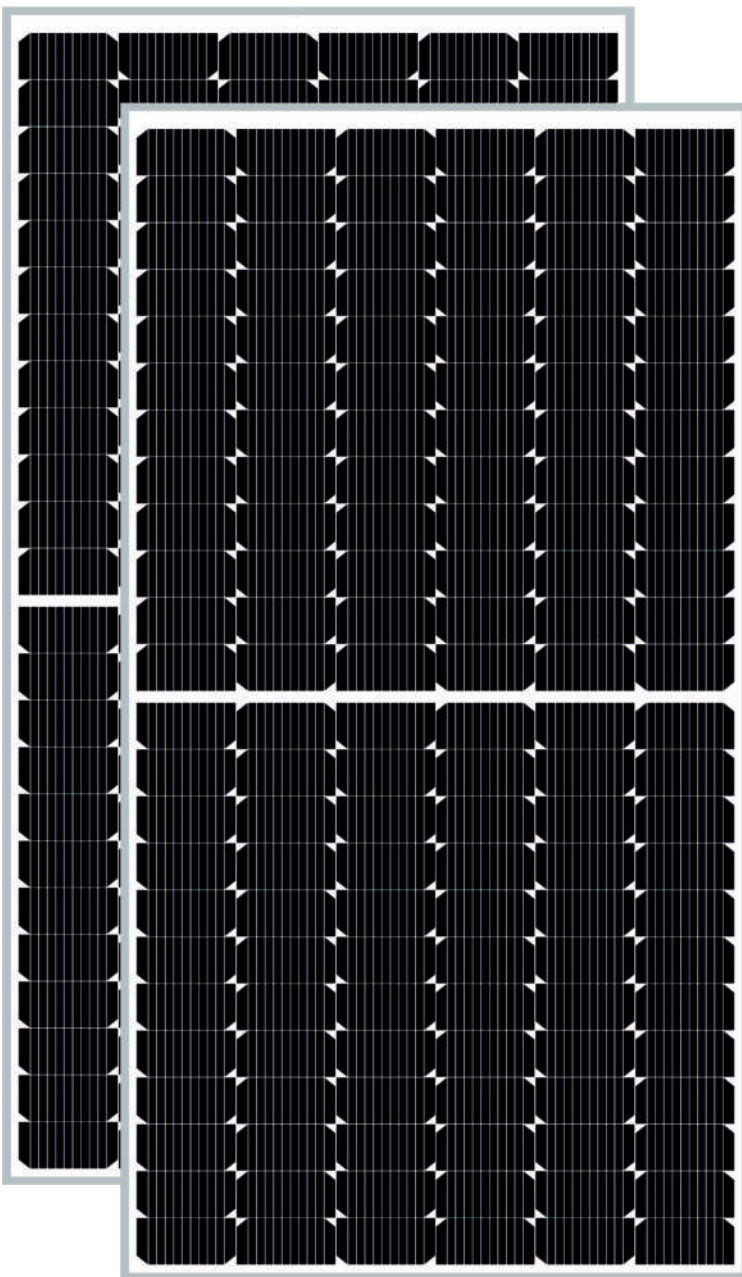
- **40+Years of Experience**
Trusted Expertise Built Over Four Decades in the Solar Industry.
- **Authorized Kirloskar Distributor**
Official Distributor for Palakkad, Malappuram, and Thrissur, Ernakulam Districts.
- **Proven Track Record**
Successfully Completed 1500+ Solar Installations With Excellence.
- **Top Quality Solar Panels**
Offering Only Premium, Reliable, and Efficient Solar Solutions.
- **One Trusted Brand**
A Name Customers Trust for Quality, Service and Sustainability

The Sun Never Sends a Bill, Why Not Use it

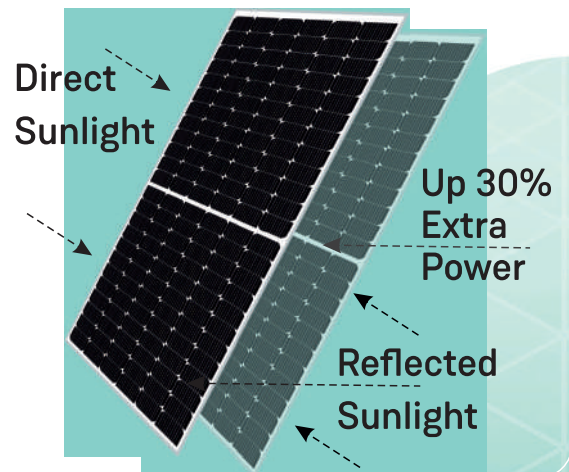


DCR 520 - 540 Wp

144 Mono Cell

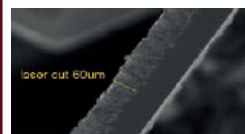


Generate Power from Both Sides



Non Destructive Cell Cutting for Zero Micro Cracks

Manual Laser Cutting



Less than 1500° C
High Temp

Non-Destructive Cutting (NDC)

30% More Mechanical Strength



Less than 130° C
Low Temp

ON-GRID STRING INVERTER 50 kW to 80 kW

- 6/7 MPPTs, fusefree design
- High efficiency upto 99%
- One-click diagnosis
- String monitoring
- AC & DC type II SPD
- AFCI optional

karloskar



AC STATIC WATT HOUR METER

- Compliant with Indian (IS 13779, CBIP 325) & IEC Standards.
- Class 1.0 Accuracy, Adhering to IS and IEC Standards.
- Clear LCD Display for Easy Reading of Energy consumption.
- Single Phase Multi-function Electric Meter.
- 5-30 A, 2 Wire, 240 V, 50 Hz, 3200 imp/kWh.
- Light Weight, Dust Proof Body

**Lauritz
Knudsen**

Electrical & Automation



FRONT SIDE ELECTRICAL DATA (STC)							
Model No.	KS144 BHCMP520	KS144 BHCMP525	KS144 BHCMP530	KS144 BHCMP535	KS144 BHCMP540	KS144 BHCMP545	KS144 BHCMP550
Peak Power Output -Pmax(Wp)	520	525	530	535	540	545	550
Power Output Tolerance (Wp)	0 ~ +5	0 ~ +5	0 ~ +5	0 ~ +5	0 ~ +5	0 ~ +5	0 ~ +5
Open Circuit Current-Voc(V)	48.83	48.91	49.05	49.14	49.23	49.34	49.48
Maximum Power Voltage-Vmpp(V)	41.25	41.35	41.50	41.70	41.80	41.94	42.06
Short circuit current-Isc(A)	13.55	13.60	13.65	13.71	13.79	13.86	13.92
Maximum Power Current-Impp(A)	12.61	12.70	12.77	12.83	12.92	13.00	13.08
Module Efficiency (%)	20.11	20.31	20.50	20.69	20.89	21.08	21.27
Fill Factor (%)	78.59	78.93	79.16	79.41	79.54	79.70	79.85

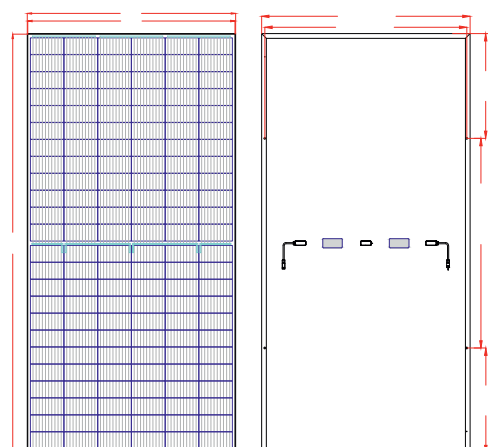
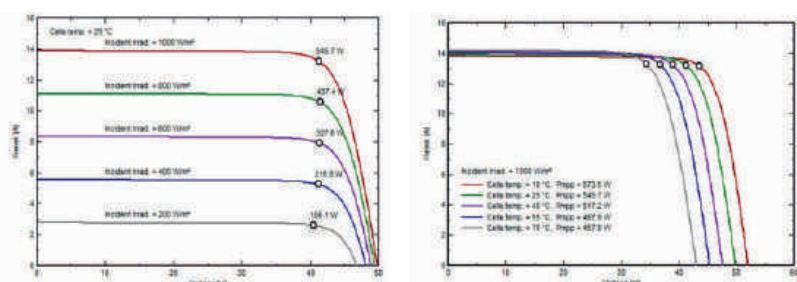
BACK SIDE POWER GAIN							
With 10% Gain	Peak Power (Wp)	52	53	53	54	54	55
With 15% Gain	Peak Power (Wp)	78	79	80	80	81	82
With 20% Gain	Peak Power (Wp)	104	105	106	107	108	109
With 25% Gain	Peak Power (Wp)	130	131	133	134	135	136
With 30% Gain	Peak Power (Wp)	156	158	159	161	162	164

TOTAL POWER (FRONT+BACK)							
With 10% Gain	Peak Power (Wp)	572	578	583	589	594	600
	Efficiency η_m (%)	22.12	22.34	22.55	22.76	22.97	23.19
With 15% Gain	Peak Power (Wp)	598	604	610	615	621	627
	Efficiency η_m (%)	23.13	23.35	23.57	23.80	24.02	24.24
With 20% Gain	Peak Power (Wp)	624	630	636	642	648	654
	Efficiency η_m (%)	24.13	24.37	24.60	24.83	25.06	25.29
With 25% Gain	Peak Power (Wp)	650	656	663	669	675	681
	Efficiency η_m (%)	25.14	25.38	25.62	25.87	26.11	26.35
With 30% Gain	Peak Power (Wp)	676	683	689	696	702	709
	Efficiency η_m (%)	26.15	26.40	26.65	26.90	27.15	27.40

MECHANICAL DATA	
Solar Cells Per Module (units)	144
Cells Configuration (Matrix)	24 × 6
Monocrystalline Solar Half-cell Size(mm)	182 × 91
Length(L) × Width(W) × Thickness(T) in mm	2280 × 1134 × 35
Area of module (sq-m)	2.58552
Weight of module(kg)	27.1
Junction Box	IP 68 rated Split Junction Box with Individual Bypass Diode
Connector	(MC4) Amphenol
Front Cover(Glass)	Low Iron High Transmission AR Coated Tempered Glass
Encapsulant	EVA
Back cover(Backsheet)	Transparent Backsheet (composite film)
Frame	Anodized Aluminum Frame hollow profile

Temperature Ratings	
NOCT	45°C ± 2°C
Maximum System Voltage	1500V DC
Maximum Series Fuse Rating	25A
Temperature Coefficient of Pmax	-0.39% /°C
Temperature Coefficient of Voc	-0.30% /°C
Temperature coefficient of Isc	0.06% /°C
Temperature Range	- 40°C to + 85°C

Mechanical Drawing of Solar Panel



lue at Standard Testing Conditions (STC) :Temp 25 Degrees C,Irradiance 1000W/m2, AM 1.5

ease confirm mounting dimensions and ratings with our sales team before ordering Performance warranty

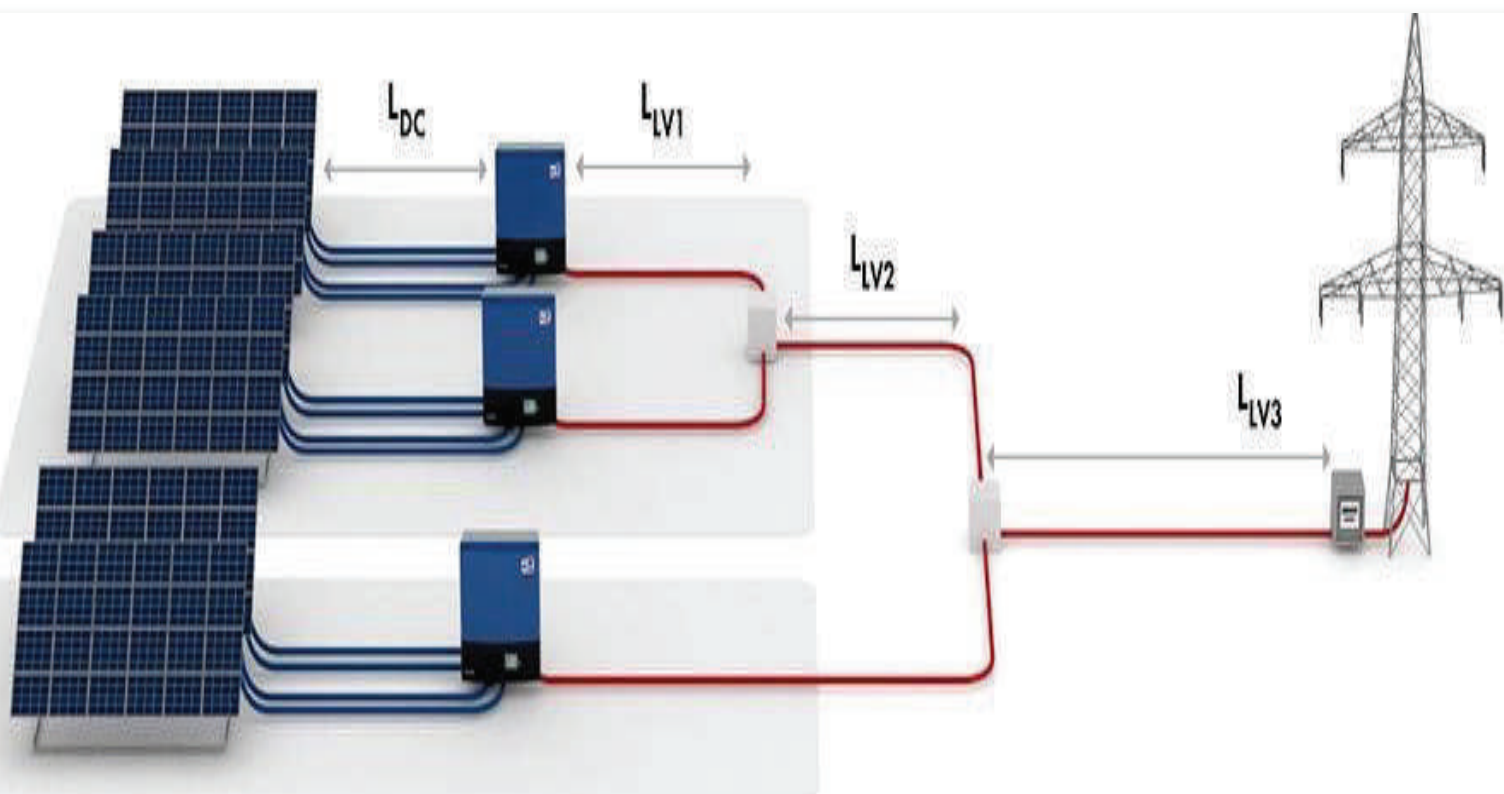
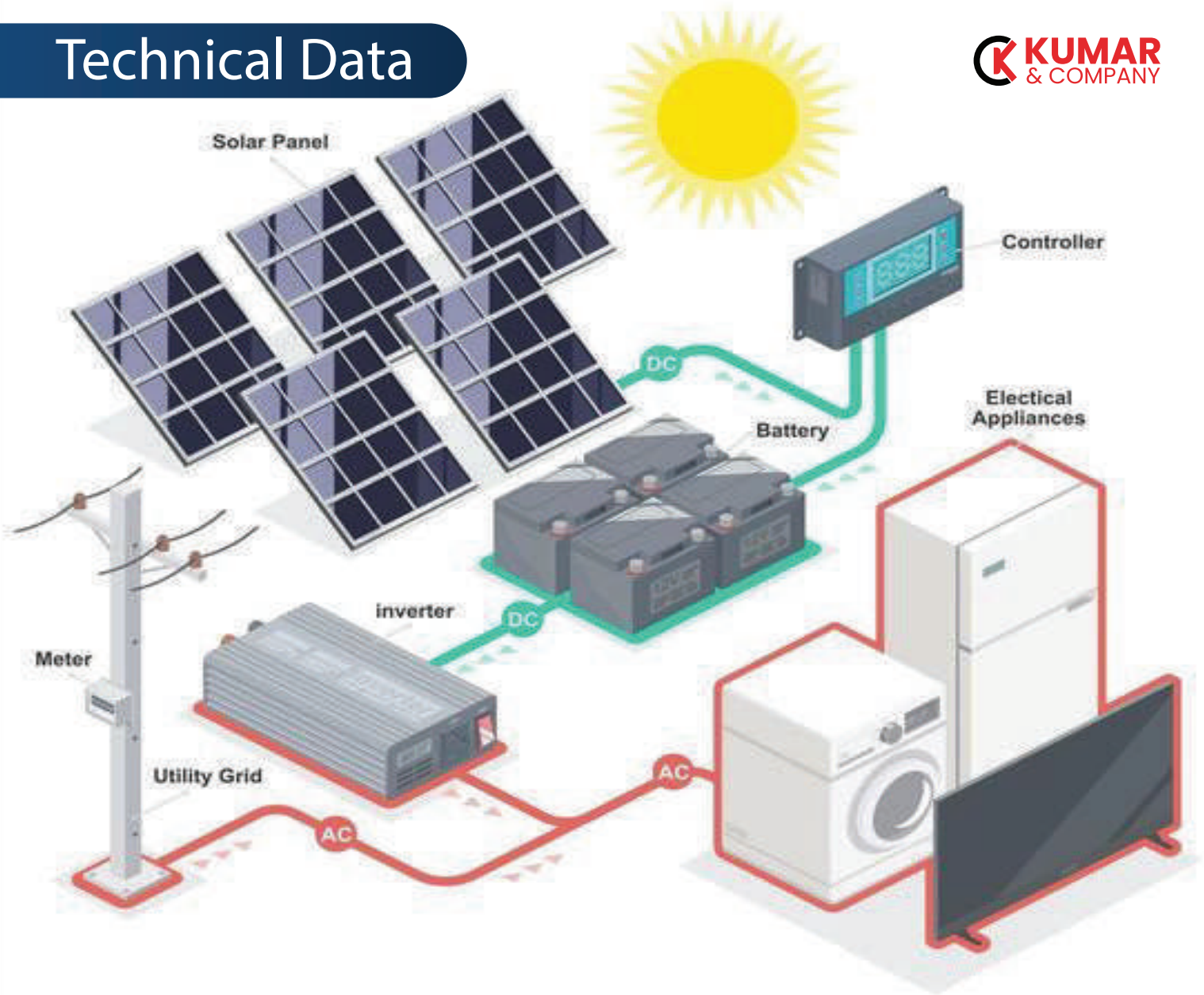
Linear power warranty for 25 years with 2.5% for 1st year, 1st year degradation and 0.75% from year 2 to year 25

provals IEC 61730-1&2*, IEC 61701*

Datasheet	KSG-III-50KN22-X2	KSG-III-60KN22	KSG-III-80KN22
INPUT DATA (DC)			
Max. recommended PV power (for module STC)	75000W	90000W	120000W
Max.DC voltage	1100V		
Start voltage	250V		
Nominal voltage	585V	585V	600V
MPPT voltage range	200V-1000V		
No. of MPP trackers	6	6	7
No. of PV strings per MPP tracker	2		
Max. input current per MPP tracker	26A		
Max. short-circuit current per MPP tracker	32A		
OUTPUT DATA (AC)			
AC nominal power	50000W	60000W	80000W
Max. AC apparent power	55500VA	66600VA	88800VA
Nominal AC voltage(range*)	220V/380V, 230V/400V (340-440V)		
AC grid frequency(range*)	50/60 Hz (45-55Hz/55-65 Hz)		
Max. output current	80.5A	96.6A	128.8A
Adjustable power factor	0.8leading ...0.8lagging		
THDi	<3%		
AC grid connection type	3W+N+PE		
EFFICIENCY			
Max.efficiency	98.8%	98.8%	99%
European efficiency	98.4%	98.4%	98.5%
MPPT efficiency	99.9%		
PROTECTION DEVICES			
DC reverse polarity protection	Yes		
DC switch	Yes		
DC surge protection	Type II / Type II		
Insulation resistance monitoring	Yes		
AC short-circuit protection	Yes		
Ground fault monitoring	Yes		
Grid monitoring	Yes		
Anti-islanding protection	Yes		
Residual-current monitoring unit	Yes		
String monitoring	Yes		
AFCI protection	Optional		
GENERAL DATA			
Dimensions (W / H / D)	860/600/300mm		
Weight	82kg	82kg	86kg
Operating temperature range	-25°C ... +60°C		
Self-consumption	< 1W		
Topology	Transformerless		
Cooling	Smart air cooling		
Protection degree	IP65		
Relative humidity	0-100%		
Altitude	4000m		
DC connection	H4/MC4(Optional)		
AC connection	Cable gland+O T terminal		
Display	LED/WIFI+APP		
Interfaces: RS485 / USB /WiFi/ RF/GPRS	Yes/Yes /Optional/Optional/Optional		
Warranty: 5 years / 10 years	Yes /Optional		

BRAND	ITEM DESCRIPTION
	High-efficiency IEC-certified Solar PV Modules with 25 years performance warranty. Trusted brand in renewable solutions.
	Reliable on-grid inverters with 5KW single-phase output, known for smart energy conversion. IEC certified, 7 years warranty.
	Supplies BIS certified AC & DC weatherproof cables, 4mm, high-quality insulation, durable, 5 years warranty.
	Premium ACDB, Isolators, and Energy Meters with high electrical safety standards. 1–2 years warranty.
	Used in DCDB & ACDB – includes 25A MCB, Fuses, SPD; certified and known for protection. 2 years warranty.
	Providers of chemical earthing, surge arrestors, ISI-standard materials. 1-year warranty.
	Energy meters offering longer 2-year warranty for tracking solar power export/import

Technical Data



SCOPE OF WORK:

1. Design for 5kWp Solar GRID TIE Power Generating system
2. Solar panel mounting 5kWp solar panel.
3. Complete DC & AC side wiring using 4 mm UV Cable.
4. Earthing for solar panel and structure.
5. Surge protection for system
6. Complete installation and commissioning of 5kWp solar grid tie system.
7. KSEB approvals

WARRANTY FOR INDIVIDUAL ITEMS IS AS FOLLOWS (SOLAR PV SYSTEM) -

- Solar Module:
 - A. KIRLOKAR SOLAR: 10 Years product and 15 years performance warranty
- ON Grid Inverter:
 - B. IEC Certified Standard inverter 7 Years & expandable up to 10 years

NB : If it is under a government scheme, the warranty will be as per the government rule.

PAYMENT TERMS

- 95% as First payment –
Work - Electrical & Structural Drawings (SLD) preparations, KSEB feasibility works, Solar Panel delivery, Structure fabrication and Panel erection, Inverter delivery, Electrical wiring, Installation & commissioning
- 5% payment - After successful commissioning

TERMS & CONDITIONS

- Delivery - The entire system shall be dispatched from our works within 6 to 16 days from the date of receipt of your advance payment.
- Validity – This offer valid for a period of 10 days only.
- This includes KSEB feasibility, KSEB security deposit & other inspection charges.

NOTE

- The customer has to arrange Shadow-Free surface required for mounting Solar Panels as per the design drawing provided by Samyac Solar & Energy Solutions. The above-mentioned generations are software generated unde STC and subject to change with respect to site conditions.
- All service calls within the warranty period made will be charged if the problem of the system non-functioning is found to be in the scope of the client

SOLAR PANELS WARRANTY



The solar PV system offered comes with robust warranty coverage to Ensure long-term performance and peace of mind. The Kirloskar solar Modules include a 10-year product warranty along with a 15-year Performance warranty, providing reliable energy generation over time.

The on-grid inverter, which is IEC certified, carries a standard 7-year warranty, with an option to extend it up to 10 years for enhanced operational security. All other components such as cabling, protection devices, ACDB, DCDB, and earthing systems come with standard warranties ranging from 1 to 5 years, depending on the brand and type of product used. This comprehensive warranty structure ensures high-quality performance, safety, and service reliability throughout the system's lifecycle.

PRICING AND ESTIMATION

Project Estimate: 5 kWp ON GRID



SL	PARTICULAR	DESCRIPTION	BRAND	WARRANTY
1	SOLAR PV MODULES	IEC CERTIFIED	KIRLOSKAR PANEL	25 YEARS PERFORMANCE
2	ON - GRID INVERTER	5 KW, SINGLE PHASE, IEC CERTIFIED	KIRLOSKAR / GROWATT	07 YEARS LIMITED PRODUCT
3	MOUNTING STRUCTURE	Standard Steel		5 Years
4	DC CABLING	WEATHER PROOF DC CABLES (4MM). WATERPROOF CABLE CONNECTORS. HIGH GRADE PVC CONDUIT. BIS CERTIFIED	POLYCAB	5 YEARS
5	AC CABLING	4MM COPPER BIS CERTIFIED	POLYCAB	5 YEARS
6	DC DB	25A MCB,16A FUSE, WITH SPD. IEC CERTIFIED	FINDER, ELMAX MERSEN,HAVELS	2 YEARS WITHOUT FUSES AND SPD
7	ACDB	25A MCB, WITH SPD IEC CERTIFIED	FINDER/ L&T MERSEN,HAVELS	2 YEARS WITH OUT FUSES AND SPD
8	PROTECTION	DC SURGE ARRESTERS. AC SURGE ARRESTERS. IEC CERTIFIED	TRUE POWER EXCEL-EARTHING STANDARD ISI	1 YEARS
9	EARTHING AC, DC & LIGHTNING ARRESTOR	CHEMICAL EARTHING	TRUE POWER EXCEL-EARTHING STANDARD ISI	1 YEARS
10	ENERGY METER	AC STATIC WATTHOUR EM101+	L&T	1 YEAR
			GENUS	2 YEAR
11	ISOLATOR	40A ISOLATOR	L&T	1 YEARS



📍 Opposite Punjab National Bank, Cherpulassery, Kerala 679503

☎ Phone: +91-90484 44117

✉ kumarandcompany.kerala@gmail.com

🌐 www.kumarandcompany.com

KUMAR & COMPANY

