

# Photon 48V/2700W

## Solar Charger



To support renewable installations in telecom networks in areas of poor grid or no grid, Exicom has introduced Photon 48V/2700W Solar Charger. With the MPPT algorithm ensuring close to 100% panel utilization and converter efficiency up to 96.0%, the galvanic isolated solar charger sets new standards for renewable power in telecom

### Key Features:

- High efficiency of 96.0% of solar charger and MPPT efficiency of >99%
- Galvanic isolation as required per telecom standards
- Works in conjunction with Exicom AC-DC rectifiers and same M1000 controller platform making future expansion flexible, easy and simplified
- DC input range of 150V-390V supporting high voltage solar panel architecture to reduce costs of DC cables and optimize I&C costs
- Multi-application use
- TUV and CE Compliance

### Applications:

- Telecom: Renewable or hybrid base station sites, LTE/WiMax, hub sites
- Smart Cities: Solar powered smart poles, surveillance etc.
- Commercial & Industrial solar installations, DC homes

# Photon 48V/2700W - Technical Specifications



INPUT	
Voltage(Nominal)	200VDC - 350VDC
Voltage(Operating)	150VDC - 390VDC
Input Protection	Off < 120 - 410Vdc < Off Reverse Polarity Fuses on both line (+ & -)
Galvanic Isolation	
Input to Output	3000 V ac
Input to Ground	1500 V ac
Output to Ground	500 V ac

DC OUTPUT	
Voltage	54.0V; Adj: 42.0 - 58.0V
Output Power	2,700 W 1400W at 150V
Maximum Current	50 A
Current Sharing	Passive
Static Voltage regulation	+/-0.5% from 10% - 100% load
Dynamic Voltage Regulation	+/-5% for 10% - 90% load
Dynamic Voltage Regulation	+/-5% for 90% - 10% load
Hold up time, Max Op. Power	>10ms; output voltage > 42Vdc
Ripple Noise	<250 mV p-p 30MHz bandwidth
Output Protection	Over Voltage Shutdown Overload Foldback Short Circuit Proof Output Fuse Protection Over Temperature Shut-Off
Efficiency	Peak 96.0%

Specifications are subject to change without notice

OTHER SPECIFICATIONS	
Operating Temperature	-40°C to +75°C, Linear derating from 45°C onwards
Storage Temperature	-40°C to +85°C
Cooling	5% to 95% non-condensing
Humidity	Forced Air
Acoustic Noise	Less than 55dB(A)
MTBF	>300,000 hrs. (25°C ambient)
Communication Interface	CAN Bus
Control & Monitoring	M1000 controller
Dimensions	106 x 50 x 360 (mm)
Weight	2.9 kg
LED Indications	
Green	On: No Faults Flash - Charger comm. Ok Slow flash - Sleep mode
Yellow (Alarms)	On - Input low / high, Charger in power de-rate mode Current limit Flash - Charger Comm. fail
Red (Alarms)	On - Abnormal temp or input shutdown, Low O/p voltage alarm, Over voltage shutdown on output Flash - Charger fan fail

APPLICABLE STANDARDS	
Electrical Safety	EN 60950
EMC/EMI	EN 55022, Class B
Environmental	EN 300 019-2-1/-2/-3

PART NO.	DESCRIPTION
HE-512880	Photon 48V/2700W SMR

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