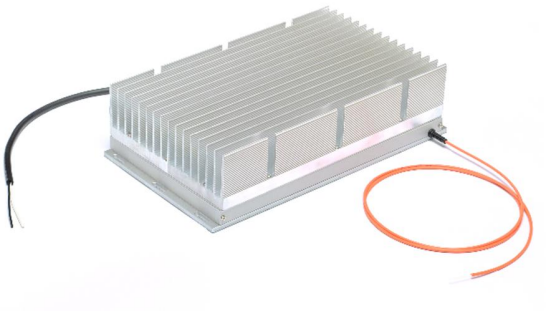
MIH® Photovoltaic Power Converter

YCH-H020 Datasheet



Key Features:

- High power PPC: 20W electrical output
- High efficiency Si-based MIH® VMJ PV cells
- Optimized for 915nm through 980nm laser sources
- Low cost, high reliability laser diode wavelengths
- Efficiency at 100W input: ~21%
- Up to 15 volts output
- FC connector available

Applications:

- Electronic Current Transducer (ECT)
- Electromagnetic Field Measurement
- RF over Fiber & 5G
- Remote Electronics and Sensors
- High Power IGBT/MOSFET Driver Circuitry
- Applications require voltage isolation, noise immunity or spark-free operation

Product Description

MH GoPower ("MHGP") offers the photovoltaic power converter (PPC) product line capable of delivering a wide range of power and voltage outputs. Power output levels range from tens of milliwatts to over 20 watts (higher power available upon request), while output voltage levels are possible from 4 volts to over 30 volts. MHGP's PPC product line operates most efficiently with wavelengths in the range of 915nm to 980nm, and with fiber with an NA of 0.22 to 0.27.

The YCH-H020 is MHGP's high power PPC for applications requiring power up to 20 watts. Device efficiencies of greater than 21%, with 100W optical input, are achievable with appropriate heat sinking. The YCH-H020 requires fiber splicing for high input power laser, and provides two jacketed copper wires for DC electrical output.

Target applications include powering remote and embedded sensors, current sensors, optical network components, as well as other applications requiring voltage isolation between the power source, and embedded electronics in high voltage or high noise environments.

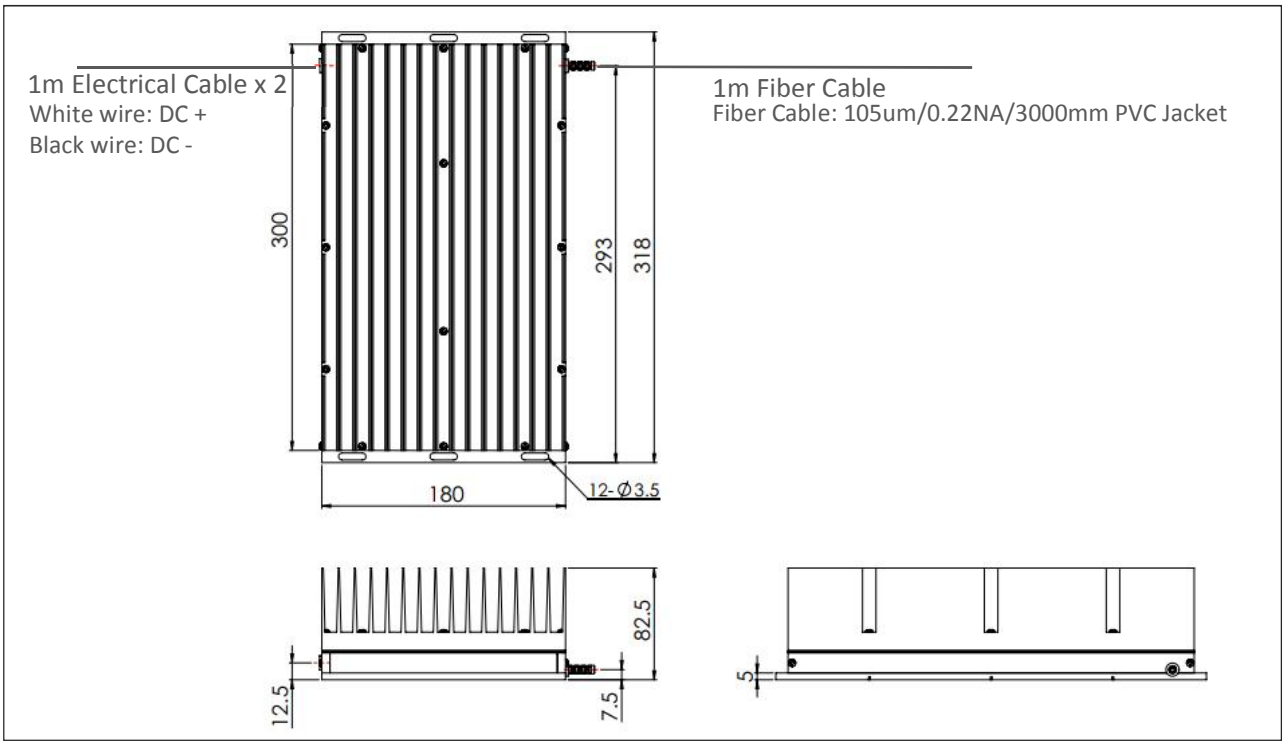
Electrical Characteristics of YCH-H020 PPC with Passive Heatsinking **

Optical Power (W)	30	50	100
Pmax (W)	8.2	12.1	21.2
Vmax (V)	17.2	16.3	14.1
Imax (mA)	480	742	1,500
Efficiency (%)	27.5%	24.3%	21.2%

*** Typical converter performance with ambient temp of ~25°C*
*** Tested with 975 nm wavelength laser*
*** PPC and heatsink held in free space, with no active airflow over the heatsink fins or PPC*

Mechanical Dimensions

(Unit: mm)



Net weight: 4.8 kg

MAKE it HAPPEN

MIH®

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