980nm 6W

PRODUCT SPECIFICATION SHEET

SPECIFICATIONS

Module series:	Monolith
Model Nr.:	M-980LM-6k
Optical power:	6000 mW
Laser class according to IEC 60825-1 standard:	4
Center wavelength:	980 nm
Center wavelength tolerance:	± 10 nm
Spectral width:	< 2 nm
Center wavelength thermal drift:	2 nm per 10 *°C*
Beam size ($1/e^2$):	TBD
Beam divergence (half angle):	TBD
Linear polarization:	Y
Polarization ratio:	100:1
Polarization azimuth tolerance:	± 5 degree
Mode structure:	Multi-mode
***M^2* (horizontal/vertical):**	TBD
Power stability (over 1 hour, CW operation, after warm-up and ±3°C):	< 0.5 %
Pointing stability (over 1 hour, CW operation, after warm-up and ±3°C):	< ±100 µrad
Output window beam centering:	< ±1 mm
Beam perpendicularity:	< ±1 degree
Warm-up time:	< 5 minute

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Laser power control modes:	Analog, TTL, USB, potentiometer
Analog input signal:	0 - 5V (0.5 - 4.5 V with TCCO* on)
TTL input signal:	0 - 0.8 V: low 2 - 5 V: high
Bandwidth (analog input, 3 dB cut-off frequency):	240 kHz (252 kHz with TCCO* off)
Rise time (10% - 90%):	700 - 900 ns (signal dependent)
Fall time (90% - 10%):	1 - 2 µs (signal dependent)
Phase shift:	0.6 - 4 µs (signal dependent)
Analog/TTL input impedance:	5 kΩ
Conection cable (laser head to control box):	HDMI 1.4 or higher, max. length 1m
Communication with PC:	USB-C (control box port only)
USB interface protocol	
Interlock:	Shorted: emission enabled (3.3V, 10 kΩ) Opened: emission disabled
Operating base plate temperature range:	< 50 °C
Operating ambient temperature range:	5 - 40 °C *(heat sink dependent)*
Storage temperature range:	(-10) - 80°C
Ingress protection (laser head only):	IP64
Power consumption:	typ. 20W max. 50W
Input voltage (Type PD):	min. 20V
Input voltage connector type:	USB-C (laser head port only)
Laser head dimensions (LxWxH):	70(84) x 120 x 46 mm

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Laser head weight:	0.7 kg
Control box dimensions (LxWxH):	53 x 29 x 36 mm (without connectors)
Control box weight:	40 g
Expected lifetime:	> 10 000 hours