

ALC-0450-05000-FM200.22 QUINTA

Overview

Main Features

- 450 nm / 5 W
- 200 μ m core fiber
- Detachable fiber
- Compact footprint
- Fiber sensor (optional)
- Temperature sensor
- Power monitor (optional)
- Visible pointer (optional)

QUINTA Package



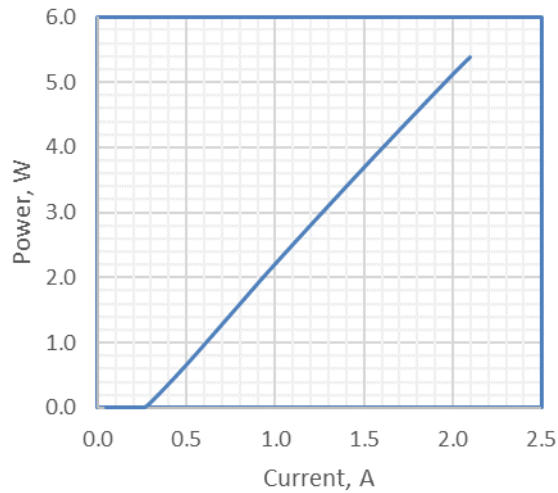
Typical Performance Characteristics

Parameter	Symbol	LD	Unit
Operating temperature	T	20	°C
Operating power ex-fiber	P _{op}	5.0	W
Center wavelength	λ	450 \pm 10	nm
Spectrum width, 1/e ²	$\Delta\lambda$	<3	nm
Wavelength-temperature coefficient (25-40°C)	$\Delta\lambda/\Delta T$	0.046	nm/°C
Linearized wavelength-current	$\Delta\lambda/\Delta I$	1.1	nm/A
Threshold current	I _{th}	0.28	A
Differential efficiency	η_{ext}	3.0	W/A
Operating current	I _{op}	2.0	A
Operating voltage	V _{op}	8.7	V
Maximum current (10 seconds)	I _{max}	2.2	A
Detachable fiber connector		SMA	
Fiber core diameter	D _{fiber}	200	μ m
Fiber NA		0.22	

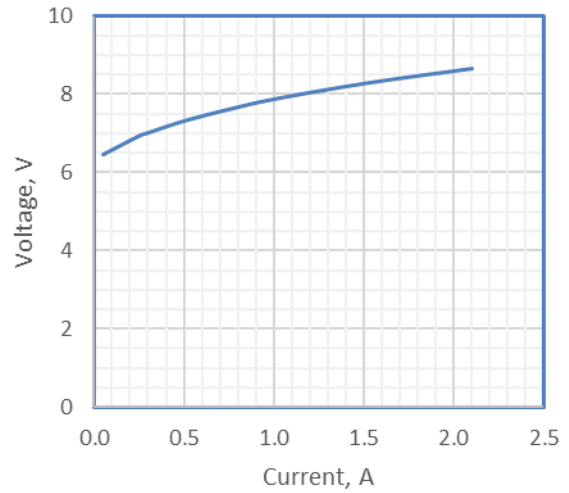
OPTIONAL POINTER: >1mW at 638 \pm 5nm, 2.9V operating voltage, typical drive current <30mA

Electro-optical characteristics

P-I at 20 °C



V-I at 20 °C

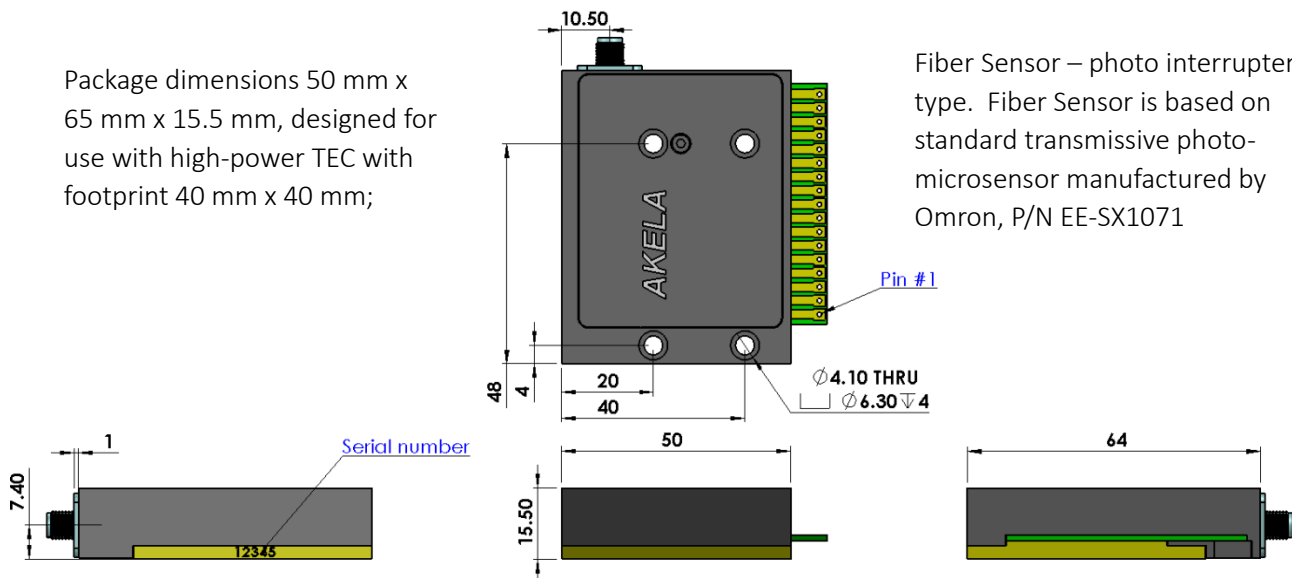


Dimensions and Pinout

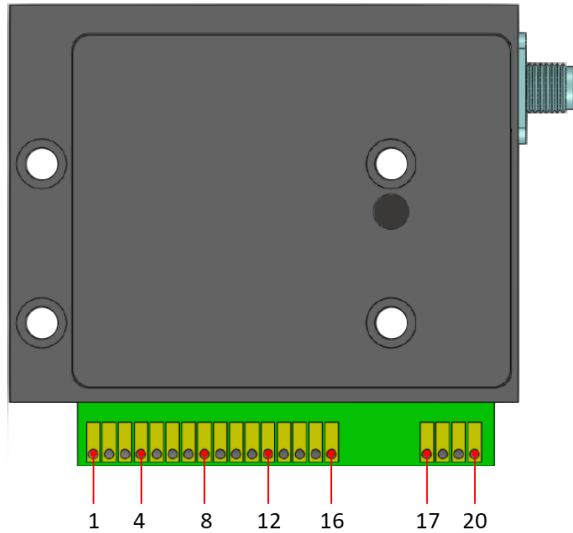
Mechanical Drawings

Package dimensions 50 mm x 65 mm x 15.5 mm, designed for use with high-power TEC with footprint 40 mm x 40 mm;

Fiber Sensor – photo interrupter type. Fiber Sensor is based on standard transmissive photo-microsensor manufactured by Omron, P/N EE-SX1071



Pinout



Pin #	Function
1	Red pointer (+) <i>optional</i>
2	Red pointer (-) <i>optional</i>
3 – 8	Not used
9 and 10	Laser Diode (+)
11 and 12	Thermistor outputs
13	Power Monitor PD (+)
14 and 15	Laser Diode (-)
16	Power Monitor PD (-)
17	Fiber Sensor Phototransistor Collector
18	Fiber Sensor Phototransistor Emitter
19	Fiber Sensor LED Cathode
20	Fiber Sensor LED Anode

Document Revision History

Revision Number	Revision Date	Nature of Revision	Approved by
1	January 10, 2024	New document created based on the recent test data	M.M.
2	March 30, 2024	Updated data table	M.M.



These components do not comply with the Federal Regulations (21 CFR Subchapter 1) as administered by the Center for Devices and Radiological health.

Purchaser acknowledges that his/her products must comply with these regulations before they can be sold.

Akela laser Corporation reserves right to change any specifications.