

HIGH POWER LASER MODULE WITH FIBER OUTPUT

RED- GREEN-BLUE (RGB) / 2.5W IN FIBER

FEATURES

- Compact size
- Detachable fiber
- Thermal sensor
- Power monitor
- Fiber sensor (for package without thermoelectric cooler / TEC)
- Built-in TEC (for package without fiber sensor / FS)

APPLICATIONS

- Medical
- Illumination
- Displays

FEATURED MODELS

- **ALC-RBG-02500-FM200.22-QFS**
(package with fiber sensor, no built-in TEC)
- **ALC-RBG-02500-FM200.22-QTEC**
(package with built-in TEC, no fiber sensor)

SPECIFICATIONS

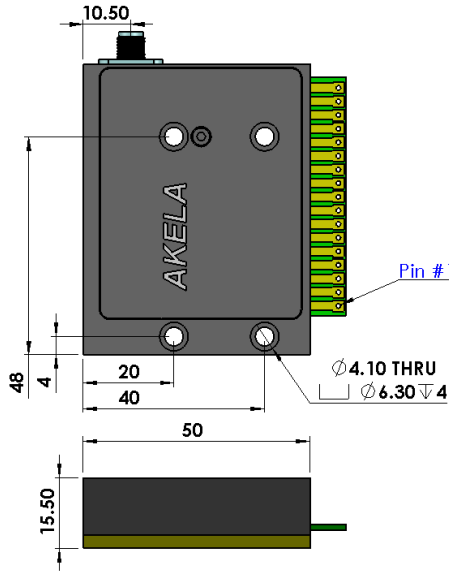
Parameters	Unit	Values		
Center Wavelength	nm	450	520	638
Wavelength Tolerance	nm	±10	±10	±10
Spectral Width	nm	<3	<3	<3
Power	W	1.0	0.7	0.8
Operating Current	A	1.4	1.6	1.4
Operating Voltage	V	5.0	4.6	2.3
Fiber Core Diameter	μm	200		
Fiber NA		0.22		
Fiber Connector		SMA		

Features	Unit	Value / Description
NTC Thermistor (included)	kΩ	10 @ 25 °C
Power Monitor (included)	mA	0.1-1
Fiber Sensor (FS, optional)	See description in the drawing of the package with FS	
Built-in TEC (optional)	See specs in the drawing of the package with TEC	

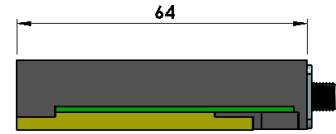
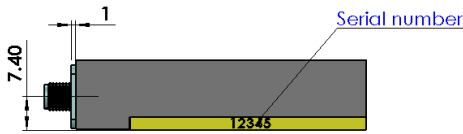
MECHANICAL DRAWINGS ALC-RGB-02500-FM200.22-QFS

PACKAGE WITH FIBER SENSOR / WITHOUT TEC

Package footprint
50 mm x 65 mm,
designed for use
with high-power
TEC with footprint
40 mm x 40 mm
underneath the
module



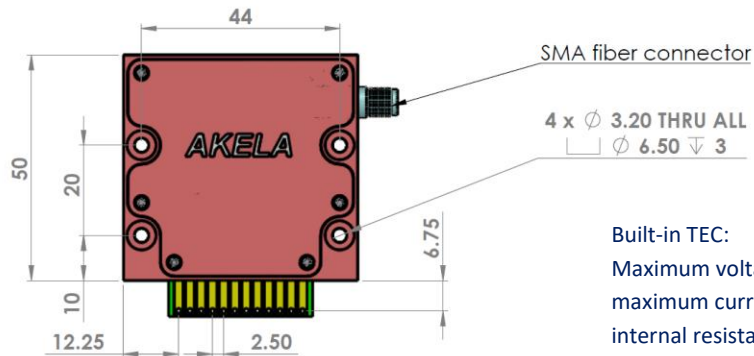
Fiber Sensor LED Typical Drive
Current: 30mA @ 4V (Reverse
Voltage), max 50mA
Fiber Sensor Phototransistor
Typical Voltage: 10V (Collector-
Emitter Voltage), max 30V
Fiber Sensor is based on standard
Photomicrosensor (Transmissive)
manufactured by Omron, P/N EE-
SX1071



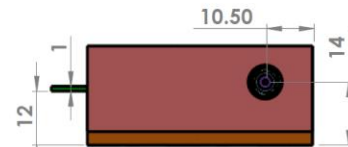
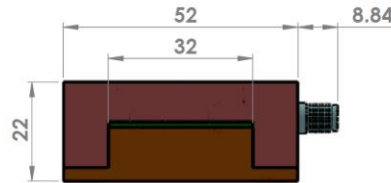
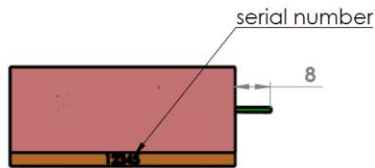
MECHANICAL DRAWINGS ALC-RGB-02500-FM200.22-QTEC

PACKAGE WITH TEC / WITHOUT FIBER SENSOR

Package footprint
50 mm x 52 mm,
suggested cold
plate (heatsink) size
not less than
40 mm x 52 mm



Built-in TEC:
Maximum voltage 4V,
maximum current 8A,
internal resistance 4 Ohm



PINOUT

PACKAGE WITH FS / WITHOUT TEC

Pin #	Function
1	450 nm LD (+)
2	450 nm LD (-)
3	Power Monitor PD (+)
4	Power Monitor PD (-)
5	520 nm LD (+)
6	520 nm LD (-)
7	Thermistor
8	Thermistor
9	638 nm LD (+)
10	638 nm LD (-)
11	FS phototransistor collector
12	FS phototransistor emitter
13	FS LED cathode
14	FS LED anode

PACKAGE WITH TEC / WITHOUT FS

Pin #	Function
1	TEC (-)
2	450 nm LD (+)
3	450 nm LD (-)
4	Power Monitor PD (+)
5	Power Monitor PD (-)
6	520 nm LD (+)
7	520 nm LD (-)
8	Thermistor
9	Thermistor
10	638 nm LD (+)
11	638 nm LD (-)
12	TEC (+)

MODULE CONFIGURATION NOTES

The module can be built with all three wavelengths included, with any two wavelengths included, or only with a single wavelength. Please refer to the following model numbers when ordering models with different configurations.

Colors included	Model numbers in package with FS / without TEC	Model numbers in package with TEC / without FS
RED-GREEN-BLUE	ALC-RGB-02500-FM200.22-QFS	ALC-RBG-02500-FM200.22-QTEC
RED-GREEN	ALC-2WL11-01500-FM200.22-QFS	ALC-2WL11-01500-FM200.22-QTEC
RED-BLUE	ALC-2WL12-01800-FM200.22-QFS	ALC-2WL12-01800-FM200.22-QTEC
BLUE-GREEN	ALC-2WL13-01700-FM200.22-QFS	ALC-2WL13-01700-FM200.22-QTEC
RED	ALC-0637-00800-FM200.22-QFS	ALC-0637-00800-FM200.22-QTEC
BLUE	ALC-0450-01000-FM200.22-QFS	ALC-0450-01000-FM200.22-QTEC
GREEN	ALC-0520-00700-FM200.22-QFS	ALC-0520-00700-FM200.22-QTEC



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.