

03BCK Diode Laser Components



03BCK diode laser components are RealLight's AW series multi-function laser modules, providing fiber-coupled output in TO package, featuring compact size, excellent beam quality, excellent power stability, high reliability and more. Single mode optical fiber accepts customization.

Key Features

- ◆ Compact size
- ◆ Excellent beam quality
- ◆ Single mode available
- ◆ Various wavelengths

Applications

Aesthetic medicine
Pilot light
Chemical analysis
Laser processing

Technical Specifications (25°C)

Package Type		03BCK (Single Mode)					03BCK (Multi Mode)	
Center Wavelength (nm)		405	450	520	638	650	638	650
Optical	CW Output Power / P _{op} (mW)	50	50	50	60	60	130	130
	Wavelength Tolerance (nm)	±10						
	Spectral Width / Δλ (nm)	<3						
	Temperature Drift of Wavelength / Δλ/ΔT (nm/°C)	0.3						
Electrical	Threshold Current / I _{th} (mA)	40	22	60	50	60	60	60
	Operating Current / I _{op} (mA)	180	150	240	260	260	240	260
	Operating Voltage / V _{op} (V)	5	5	7	2.5	2.5	2.3	2.3
	Slope Efficiency / η _{es} (W/A)	0.4	0.4	0.3	0.3	0.3	0.7	0.7
Fiber	Fiber Core Diameter / Cladding Diameter (μm)	4/125, 6/125, 9/125					105/125	
	Numerical Aperture / NA	0.14					0.22	
	Fiber Length / L (cm)	100±10 (Customizable)						
	Connector	FC/PC, SMA905						

Notes:

1. Other output power can be customized.
2. Can provide 650nm aiming beam.
3. Feedback Protection Function is available for this series of products upon request.
4. All the data in the above table are the typical values obtained from the tests at room temperature of 25°C, and the final data is subject to the final test report.

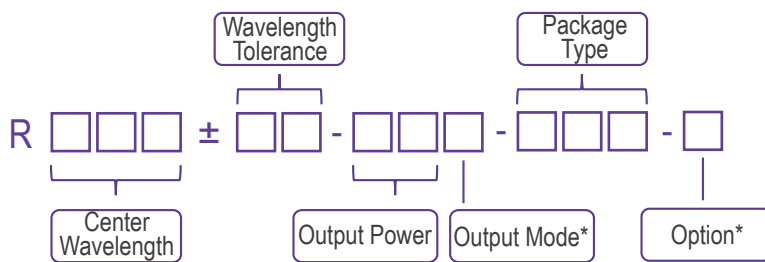
Other Parameters

Parameter	Operating Temperature /°C	Operating Relative Humidity /%	Storage Temperature /°C	Storage Relative Humidity /%	Lead Soldering Temperature (max/°C)
Min	10	-	-20	-	-
Max	30	75	70	90	250(10Sec.)

Order Information

Package	Wavelength (nm)	Output Power (mW)	Part Number
03BCK	405	50	R405±10-50mWF-03BCK-S
	450	50	R450±10-50mWF-03BCK-S
	520	50	R520±10-50mWF-03BCK-S
	638	60	R638±10-60mWF-03BCK-S
	650	60	R650±10-60mWF-03BCK-S
	638	130	R638±10-130mWF-03BCK-M
	650	130	R650±10-130mWF-03BCK-M

Part Numbering Schema



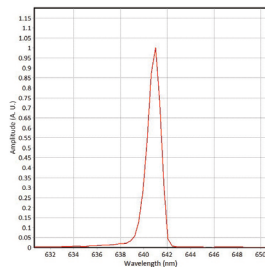
*Output Mode: F - Fiber Pigtailed

*Option: S - Single Mode Fiber

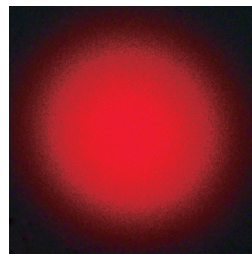
M - Multi Mode Fiber

R - Back reflection wavelength: 800-1100nm

Product Characteristics Diagrams

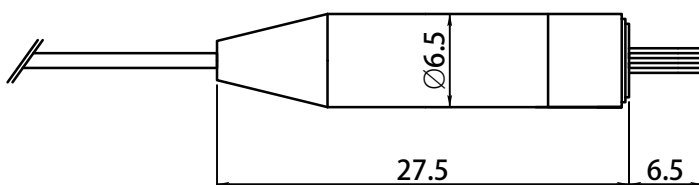


Laser Spectrum



Beam Profile

Mechanical Drawings (in mm)



Note: Pin description is subject to test report.

Pin	Function
1	Laser (-)
2	Case
3	Laser (+)

