



DWM51851FA6 – 520nm/850nm Dual Wavelength Coaxial Laser Module, Ø15mm Housing, <1mW Output Power

Data Sheet



Overview

The Lasermate DWM51851FA6 is a dual wavelength coaxial laser module that combines a visible green laser at 520nm and a near-infrared laser at 850nm into a single overlapping beam. Designed with output power <1mW, this compact laser module fits into a 15mm diameter housing. With Automatic Power Control (APC) IC inside, the module provides stable output power, reliable performance, and user-friendly integration for systems such as alignment, positioning, sensing, and low-power optical setups.

Features

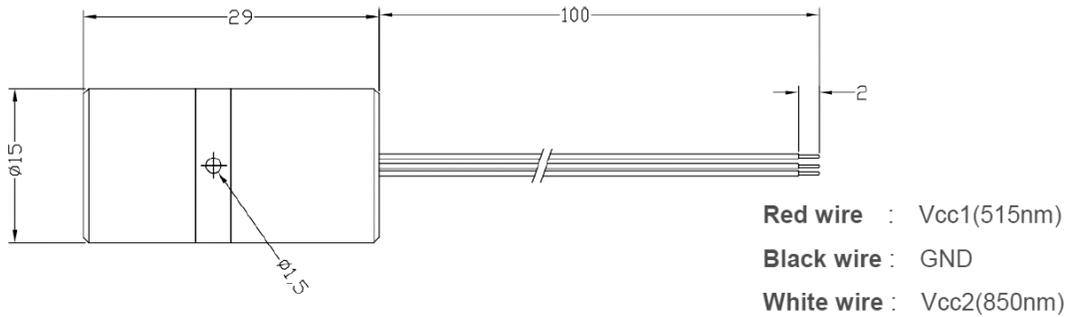
- Dual wavelength output: 520nm (green) and 850nm (near-infrared)
- Overlapping beam from both lasers for coaxial output
- Output power <1mW
- Built-in Automatic Power Control (APC) IC
- High-quality, focused laser beam
- Compact size: Ø15mm x L29mm

Specifications

Absolute Maximum Ratings			
Parameter	Symbol	Rating	Unit
Power supply voltage	V_{CC}	6	V
Optical output power	P_o	<5	mW
Operation temperature	T_{opr}	0 to 50	°C
Storage temperature	T_{stg}	0 to 85	°C

Electrical and Optical Characteristics ($T_c=25^\circ\text{C}$)						
Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Wavelength-520nm	λ_1	515	520	530	nm	$P_o = 3\text{mW}$
Wavelength-850nm	λ_2	830	845	855	nm	$P_o = 3\text{mW}$
Output power-520nm	P_{out1}	0.5		0.99	mW	Class II
Output power-850nm	P_{out2}	0.5		0.99	mW	Class IIIb
Operation current-520nm	I_{op1}	-	-	100	mA	$P_o = 3\text{mW}, V_{CC} = 6\text{V}$
Operation current-850nm	I_{op2}	-	-	60	mA	$P_o = 3\text{mW}, V_{CC} = 6\text{V}$
Operation voltage	V_{op}	-	6	6.5	Volt	
Laser beam spot size at 10m				<20mm		
Divergence angle				2mrad		

*Sufficient heat dissipation is required for CW operation.

Outline Dimensions (unit: mm)**Additional Notes**

- The laser modules are designated solely as OEM components for incorporation into the customer's end products. Therefore, it is the customer's responsibility to comply with the appropriate requirements of FDA 21CFR, section 1040.10 and 1040.11 for complete laser products. For the code of FDA regulations, please refer to [FDA Performance Standards for Light-Emitting Products](#) for detailed information.
- Specifications are subject to change without notice.