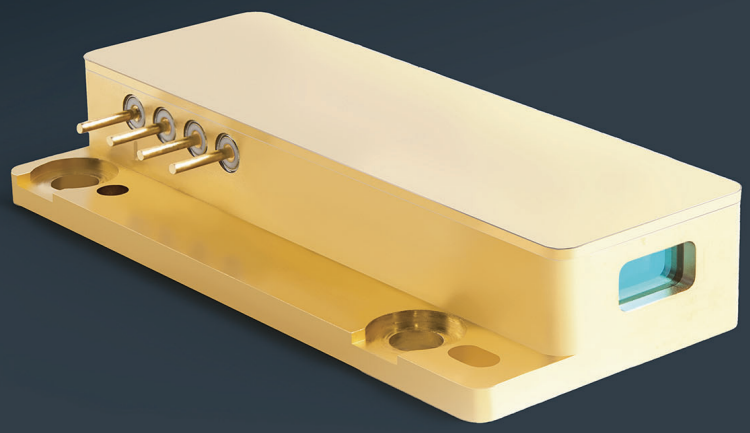
LEONARDO ELECTRONICS

DIRECT DIODE LASER POINTERS



Leonardo's direct diode laser pointers are ideal for marking and identification applications where low size and weight are a priority. These military-grade devices deliver exceptional beam stability across a wide temperature range. Designed with advanced features like custom beam shapes and hermetically sealed packaging, they offer excellent performance, ease of integration, and reliable operation. They are available in custom configurations in NIR and SWIR wavelengths to support a wide range of mission-critical applications.

KEY FEATURES

- Direct diode laser source
- Military rugged design
- Hermetically sealed package
- Options for integrated red aiming beam, power monitor, or temperature sensing
- Conductively cooled

KEY BENEFITS

- Compact solution
- Solid state reliability and efficiency
- Excellent beam stability over temperature
- Ease of integration and operation

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TYPICAL POINTER SPECIFICATIONS

All specifications at 20°C, unless noted otherwise

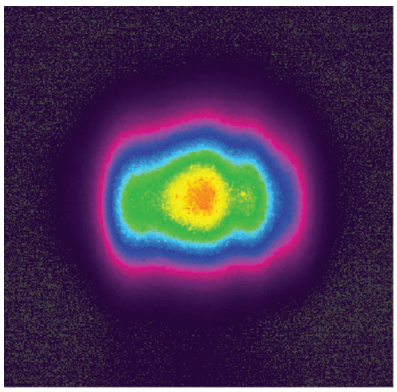
Parameters	Units	P1	P2
Optical			
CW Output Power[1]	W	2	12
Center Wavelength[2]	nm	800	865
Spectral Width (FWHM)	nm	2.5	
Power Conversion Efficiency	%	>50	>45
Polarization Extinction Ratio		1000:1	NA
FWHM Circular Beam Divergence	mrad	<1.5	15
Beam Shape[1]		Elliptical	
Near Field Beam Shape (90% Enclosed Energy)	mm	<7.5	NA
Near Field Ellipticity Ratio		<3.5	NA
Aperture Dimensions	mm	9 x 4.5	6 x 2
Electrical			
Threshold Current	A	<1	<2
Operating Current	A	<3	<20
Operating Voltage	V	<2.3	<2
Thermal			
Storage Temperature	°C	-45 to 65	
Operating Temperature (Non-Condensing)	°C	-40 to 60	-45 to 65
Wavelength Temperature Coefficient	nm/°C	0.3	
Mechanical			
Dimensions	mm	70 x 40 x 13	20 x 35 x 9
Weight	g	<75	<60

Notes

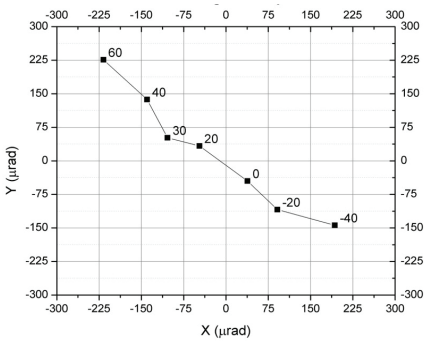
[1]Can be customized

[2]Custom wavelengths available 760-1700 nm

P1 FAR FIELD



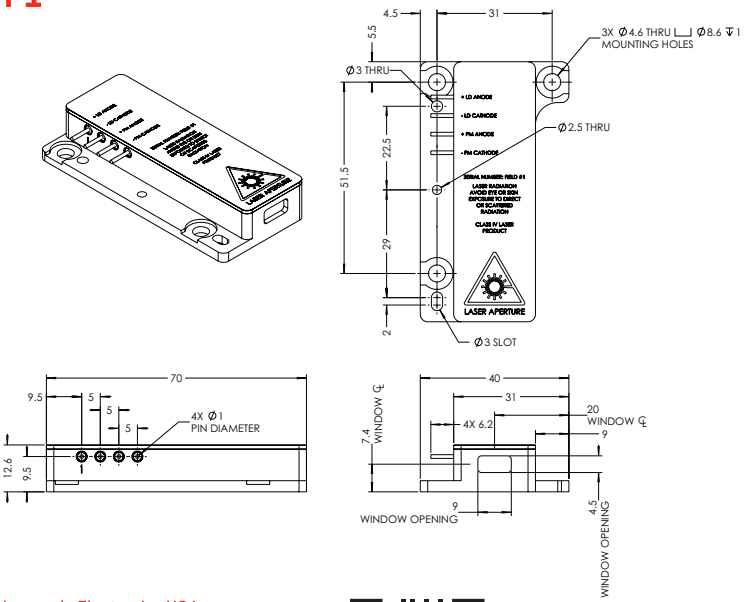
P1 BEAM WANDER VS TEMPERATURE



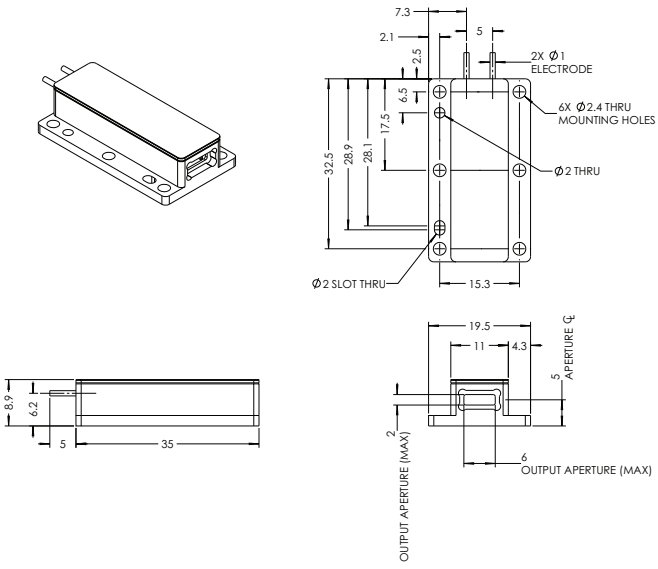
Total change less than 0.5 mrad in each axis

MECHANICAL SPECIFICATIONS

P1



P2



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NOTE: MECHANICAL DIMENSIONS IN MM

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