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GPD, IPD, CPD

High-stability Laser Modules

DESCRIPTION

The GPD, IPD and CPD family of laser diode modules offer high-stability Automatic Power Control (APC) for laser diodes without internal photodiodes. They feature wavelengths of 405 - 520 nm with 1 mW - 50 mW of output power. The 520 nm is cost-effective alternative for DPSS green lasers at 532 nm.

The GDP, IPD, and CPD modules improve stability for laser diodes without an internal photodiode by adding a external photodiode to the TO-Can. This configuration allows for APC mode of operation, which is often not available on a majority of competing DPSS lasers at these wavelengths.

The GPD model features an 8 VDC operating voltage, while the IPD is optimized for higher operating voltages at 24 VDC for more industrial applications. The CPD offers a 5 VDC operating voltage for users with limited voltage options.

Additional design features include proven wavelength stability, excellent optical power stability, and CW output. Operators can adjust output power from zero to 100% by adjusting a potentiometer on rear of the unit.

In addition, Power Technology provides custom design and manufacturing services that include high- and low-volume production, custom engineering, and customized connectors.

APPLICATIONS

- Aiming, Pointing, and Alignment
- Dimensional Scanning
- Road and Rail Inspection
- Fluorescence
- Illumination

FEATURES & BENEFITS

- Automatic Power Control
- Internal Photodiode
- High Stability

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SPECIFICATIONS

	GPD(405-50)	GPD(450-40)	GPD(515-40)	GPD(515-5)	GPD(515-30)	GPD(520-40)
Wavelength (nm)	405	450	515	515	515	520
Color	Violet	Blue	Green	Green	Green	Green
Output Power (mW)	1 - 50	1 - 40	1-40	1-5	1 - 30	1 - 40
Output Parameter	CW	CW	CW	CW	CW	CW
Output Power Stability @ 25°C	< ± 0.2%	< ± 0.2%	< ± 0.2%	< ± 0.2%	< ± 0.2%	< ± 0.2%
Output Power Stability (0-35°C)	< ± 0.5%	< ± 0.5%	< ± 0.5%	< ± 0.5%	< ± 0.5%	< ± 0.5%
Noise rms (10Hz - 5MHz)	< ± 1%	< ± 1%	< ± 1%	< ± 1%	< ± 1%	< ± 1%
Beam Properties	Collimated	Collimated	Collimated	Collimated	Collimated	Collimated
Beam Size (collimated, mm)	1.17 x 2.28	.92 x 2.3				0.81 x 2.36
Divergence (collimated)	< 1mRad	< 1mRad	< 1mRad	< 1mRad	< 1mRad	< 1mRad
Spatial Mode	TEMoo	TEMoo	TEMoo	TEMoo	TEMoo	TEMoo
User Focusable	No	No	No	No	No	No
Vibration (non-operating, Hz)	6 G (20 - 200)	6 G (20 - 200)	6 G (20 - 200)	6 G (20 - 200)	6 G (20 - 200)	6 G (20 - 200)
Shock	TBD	TBD	TBD	TBD	TBD	TBD
Operating Voltage (VDC)	8	8	8	8	8	8
Maximum Operating Current (mA)	200	200	200	200	200	200
Temperature Range (°C)	0 - 35	0 - 35	0-35	0 -35	0 - 35	0 - 35
Beam Pointing Stability (°C)	<10µRad/	<10µRad/	<10µRad/	<10µRad/	<10µRad/	<10µRad/

	IPD(405-50)	IPD(450-40)	IPD(515-30)	IPD(520-40)
Wavelength (nm)	405	450	515	520
Color	Violet	Blue	Green	Green
Output Power (mW)	1 - 50	1 - 40	1 - 30	1 - 40
Output Parameter	CW	CW	CW	CW
Output Power Stability @ 25°C	< ± 0.2%	< ± 0.2%	< ± 0.2%	< ± 0.2%
Output Power Stability (0-35°C)	< ± 0.5%	< ± 0.5%	< ± 0.5%	< ± 0.5%
Noise rms (10Hz - 5MHz)	< ± 1%	< ± 1%	< ± 1%	< ± 1%
Beam Properties	Collimated	Collimated	Collimated	Collimated
Beam Size (collimated, mm)	1.17 x 2.28	.92 x 2.3		0.81 x 2.36
Divergence (collimated)	< 1mRad	< 1mRad	< 1mRad	< 1mRad
Spatial Mode	TEMoo	TEMoo	TEMoo	TEMoo
User Focusable	No	No	No	No
Vibration (non-operating, Hz)	6 G (20 - 200)	6 G (20 - 200)	6 G (20 - 200)	6 G (20 - 200)
Shock	TBD	TBD	TBD	TBD
Operating Voltage (VDC)	24 nom (12-32)	24 nom (12-32)	24 nom (12-32)	24 nom (12-32)
Maximum Operating Current (mA)	200	200	200	200
Temperature Range (°C)	0 - 35	0 - 35	0 - 35	0 - 35
Beam Pointing Stability (°C)	<10µRad/	<10µRad/	<10µRad/	<10µRad/

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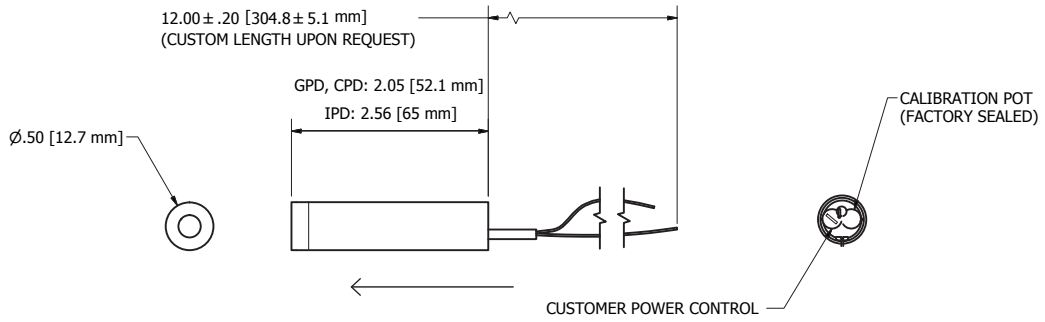
	CPD(405-50)	CPD(450-40)	CPD(510-30)	CPD(515-30)	CPD(520-40)
Wavelength (nm)	405	450	510	515	520
Color	Violet	Blue	Green	Green	Green
Output Power (mW)	1 - 50	1 - 40	1 - 30	1 - 30	1 - 40
Output Parameter	CW	CW	CW	CW	CW
Output Power Stability @ 25°C	< ± 0.2%	< ± 0.2%	< ± 0.2%	< ± 0.2%	< ± 0.2%
Output Power Stability (0-35°C)	< ± 0.5%	< ± 0.5%	< ± 0.5%	< ± 0.5%	< ± 0.5%
Noise rms (10Hz - 5MHz)	< ± 1%	< ± 1%	< ± 1%	< ± 1%	< ± 1%
Beam Properties	Collimated	Collimated	Collimated	Collimated	Collimated
Beam Size (collimated, mm)	1.17 x 2.28	.92 x 2.3			0.81 x 2.36
Divergence (collimated)	< 1mRad	< 1mRad	< 1mRad	< 1mRad	< 1mRad
Spatial Mode	TEMoo	TEMoo	TEMoo	TEMoo	TEMoo
User Focusable	No	No	No	No	No
Vibration (non-operating, Hz)	6 G (20 - 200)	6 G (20 - 200)	6 G (20 - 200)	6 G (20 - 200)	6 G (20 - 200)
Shock	TBD	TBD	TBD	TBD	TBD
Operating Voltage (VDC)	5	5	5	5	5
Maximum Operating Current (mA)	200	200	200	200	200
Temperature Range (°C)	0 - 35	0 - 35	0 - 35	0 - 35	0 - 35
Beam Pointing Stability (°C)	<10µRad/	<10µRad/	<10µRad/	<10µRad/	<10µRad/

MECHANICAL DRAWINGS



SAFETY WARNINGS

COMPLIANT & REGISTERED

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REACH COMPLIANCE

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International Traffic in Arms Regulations

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