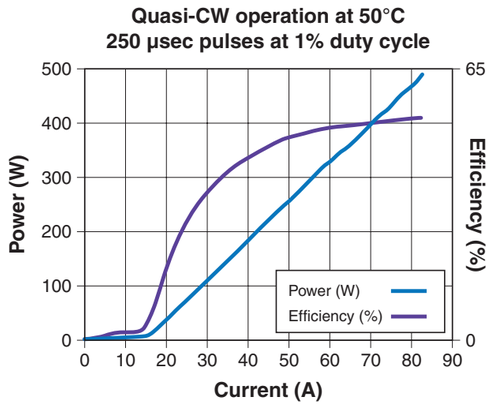
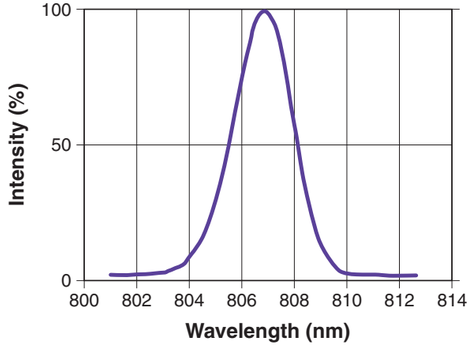
PulseLife™ G-stack

Semiconductor Laser Stack for Quasi-CW Operation

Electrical Characteristics



Wavelength Characterization



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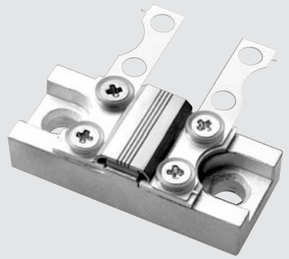
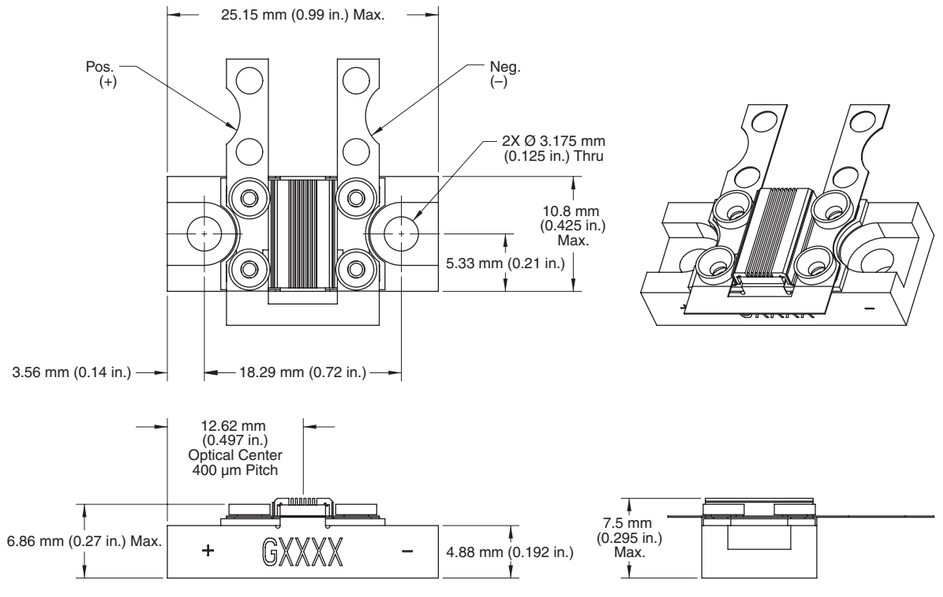


Features

- Telecom-grade solder technology
- Small footprint
- Competitive pricing
- Flexible design: 2-bar to 7-bar stacks on a single platform
- High efficiency operation
- Shock and vibration tolerant

Mechanical Specifications



Superior Reliability & Performance

PulseLife™ G-stack[1]

Semiconductor Laser Stack for Quasi-CW Operation

	Name	Stack-G07-PL-700W-QCW -805.0to811.0nm-F<3.5-25C-STD	Stack-G06-PL-600W-QCW -805.0to811.0nm-F<3.5-25C-STD	Stack-G05-PL-500W-QCW -805.0to811.0nm-F<3.5-25C-STD	Stack-G04-PL-400W-QCW -805.0to811.0nm-F<3.5-25C-STD	Stack-G03-PL-300W-QCW -805.0to811.0nm-F<3.5-25C-STD	Stack-G02-PL-200W-QCW -805.0to811.0nm-F<3.5-25C-STD
Optical Characteristics	Part Number	**1126275**	**1126272**	**1126270**	**1126267**	**1126245**	**1126243**
	Power (W)	700	600	500	400	300	200
	Number of Bars	7	6	5	4	3	2
	Center Wavelength (nm)	808	808	808	808	808	808
	Center Wavelength Tolerance (nm)	±3	±3	±3	±3	±3	±3
	Spectral Width (FWHM)	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5
	Bar Pitch (µm)	400	400	400	400	400	400
	Emitting Width (mm)	10	10	10	10	10	10
	Slow Axis Divergence (FWHM)	<12	<12	<12	<12	<12	<12
	Fast Axis Divergence (FWHM)	<40	<40	<40	<40	<40	<40
Electrical Characteristics	Pulse Width (µsec)	250*	250*	250*	250*	250*	250*
	Duty Cycle (%)	<2%	<2%	<2%	<2%	<2%	<2%
	Conversion Efficiency (%)	50	50	50	50	50	50
	Threshold Current (A)	15	15	15	15	15	15
	Operating Current (A)	103	103	103	103	103	103
	Operating Voltage (V)	13.4	11.5	9.6	7.6	5.7	3.8
	Series Resistance (mΩ)	16.8	15.2	13.6	12	10.4	8.8
Thermal Characteristics	Operating Temperature (°C)	25	25	25	25	25	25
	Storage Temperature (°C)	-40 to 60	-40 to 60	-40 to 60	-40 to 60	-40 to 60	-40 to 60
Reliability Specifications	Lifetime Expectation (shots)	>1e^9	>1e^9	>1e^9	>1e^9	>1e^9	>1e^9

	Name	Stack-G07-PL-560W-QCW -805.0to811.0nm-F<3.5-50C-STD	Stack-G06-PL-480W-QCW -805.0to811.0nm-F<3.5-50C-STD	Stack-G05-PL-400W-QCW -805.0to811.0nm-F<3.5-50C-STD	Stack-G04-PL-320W-QCW -805.0to811.0nm-F<3.5-50C-STD	Stack-G03-PL-240W-QCW -805.0to811.0nm-F<3.5-50C-STD	Stack-G02-PL-160W-QCW -805.0to811.0nm-F<3.5-50C-STD
Optical Characteristics	Part Number	**1126274**	**1126271**	**1126268**	**1126266**	**1126244**	**1125777**
	Power (W)	560	480	400	320	240	160
	Number of Bars	7	6	5	4	3	2
	Center Wavelength (nm)	808	808	808	808	808	808
	Center Wavelength Tolerance (nm)	±3	±3	±3	±3	±3	±3
	Spectral Width (FWHM)	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5
	Bar Pitch (µm)	400	400	400	400	400	400
	Emitting Width (mm)	10	10	10	10	10	10
	Slow Axis Divergence (FWHM)	<12	<12	<12	<12	<12	<12
	Fast Axis Divergence (FWHM)	<40	<40	<40	<40	<40	<40
Electrical Characteristics	Pulse Width (µsec)	250*	250*	250*	250*	250*	250*
	Duty Cycle (%)	<2%	<2%	<2%	<2%	<2%	<2%
	Conversion Efficiency (%)	50	50	50	50	50	50
	Threshold Current (A)	17	17	17	17	17	17
	Operating Current (A)	85	85	85	85	85	85
	Operating Voltage (V)	13.2	11.3	9.4	7.5	5.6	3.8
	Series Resistance (mΩ)	17.8	16.1	14.4	12.7	11	9.3
Thermal Characteristics	Operating Temperature (°C)	50	50	50	50	50	50
	Storage Temperature (°C)	-40 to 60	-40 to 60	-40 to 60	-40 to 60	-40 to 60	-40 to 60
Reliability Specifications	Lifetime Expectation (shots)	>1e^9	>1e^9	>1e^9	>1e^9	>1e^9	>1e^9

[1] All specifications are typical.

* Maximum pulse width of 500 microsec can be utilized under lower duty cycle conditions.