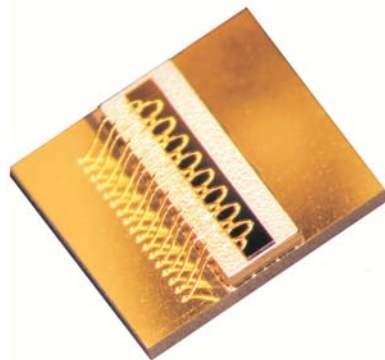




LU080810xx

Up to 8W operation power Industrial Laser



Description / Applications

The Lumics LU080810xx laser chip contains an optimized GaInAsP/AlGaAs quantum well laser structure on GaAs substrate. The extremely stringent reliability requirements are achieved through our proprietary patent facet passivation technology. The process includes careful design, exactly defined manufacturing and extensive burn-in testing. The qualification contains life time tests and a set of thermal and mechanical tests. Each laser chip is individually serialized for traceability and is shipped with a specified set of test data. Applications are in solid state laser pumping, printing or medical treatment.

Features

- Wavelength 800-820nm
- Wavelength 790-840nm on request
- Proven reliability for high power operation
- Mounting on Lumics Q-mount
- RoHs compliant

Main markets

- pumping (SSL)
- plastics welding
- marking
- printing
- medical treatment

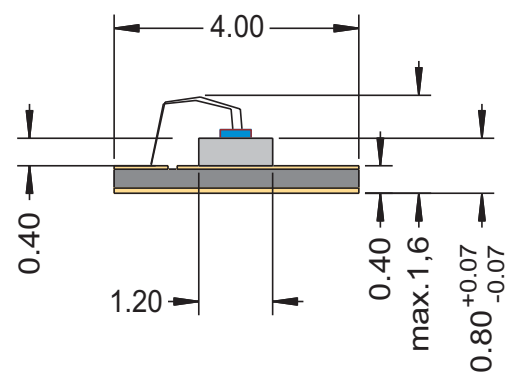
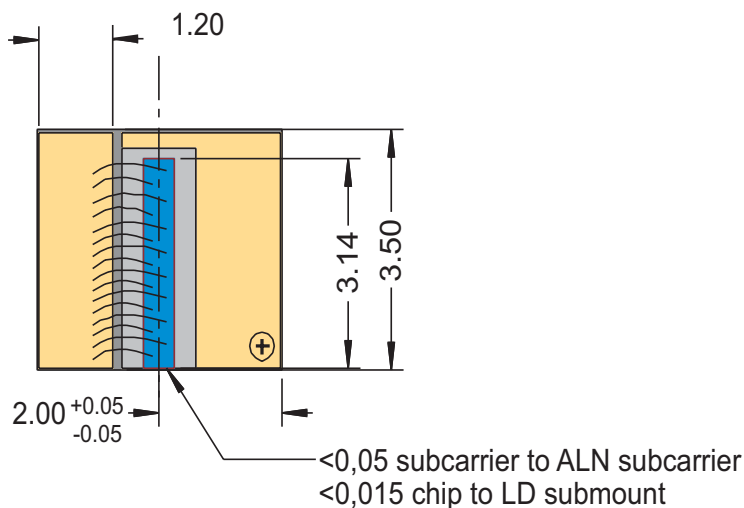
Typical Electrical and Optical Characteristics

Parameter	Symbol	LU0808I025	LU0808I050	LU0808I080	Unit
Emitter Width	W	50	100	200	μm
c.w. Operating Power	P _{op}	2.5	5	8	W
Operating Forward Current	I _{op}	2.8	5.3	8.7	A
Threshold Current	I _{th}	430	650	1200	mA
Forward Voltage	V _{op}	1.8	1.8	1.8	V
Slope Efficiency	λ _{diff}	1.0	1.02	1.1	W/A
Peak Wavelength ⁽¹⁾	λ _{peak}	808+/-10	808+/-10	808+/-10	nm
Spectral Width (fwhm)	λ _{rms}	4	5	6	nm
Beam Divergence (horizontal) ₍₂₎		8	8	8	deg
Beam Divergence (vertical) ₍₂₎		30	30	30	deg
AR Reflectivity ⁽³⁾	r _f	3	3	3	%
HR Reflectivity	r _r	95	95	95	%
Spectral Shift with Temp.	λ _{T_Shift}	0.3	0.3	0.3	nm/K
Spectral Shift with Current	λ _{P_Shift}	1.8	1.8	1.8	nm/A
Operating Temp.	T _{op}	20-30	20-30	20-30	°C

Important Notes:

- (1) to be specified in the range of 790-840nm
- (2) fwhm at P_{op}
- (3) optionally other coatings are offered on request

Drawing (dimensions in mm)



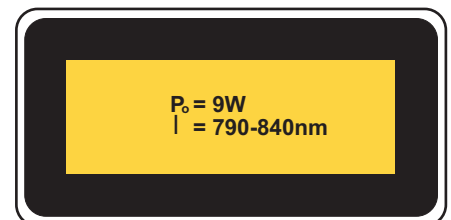
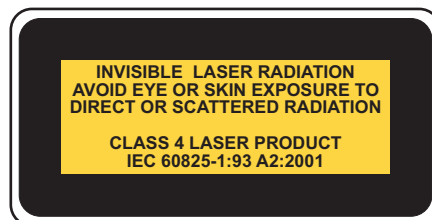
Chip p-side down mounted onto Q-mount.

Notes to Q-mounting blocks:

Material: AlN plated with Au(2-4μm) as
 top metall film,
 mounting surface with RA<1μm



Complies with 21 CFR1040.10



For further information and ordering details please contact Lumics at:

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