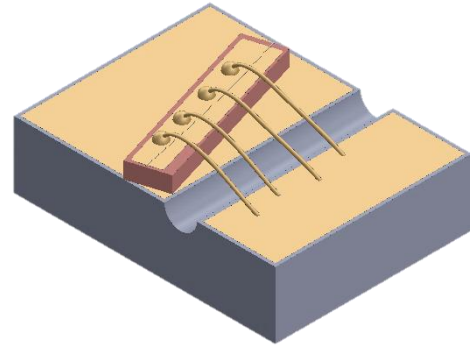


Specification Sheet | 780 nm Series

Single Angle Facet (SAF) Gain Chip

Description

The 780 nm SAF Series of high-performance edge-emitting gain chips are based on Photodigm’s advanced monolithic Gallium Arsenide (GaAs) based laser technology. It provides a single spatial mode beam, a unique anti-reflective and highly reflective coating pair (>90% HR, <0.1% AR), and has passivated facets for reliability. The 780 nm Series SAF gain chip devices have a curved waveguide forming a 5° angle exit at the facet and are frequently used in applications involving external-cavity diode lasers (ECDLs).



780 nm SAF Gain Chip Characteristics

Parameters ¹	Chip Architecture
	SAF
Wavelength, Nominal (nm)	780 ± 5
Output Power, Max (mW) ²	100
Operating Current, Max (CW & Pulsed) (mA)	250
Optical Bandwidth at 3 dB, Nominal (nm)	18

1. Characteristics at T_c = 25 °C unless otherwise specified. Operating outside of these parameters voids warranty
2. Power output is highly dependent on customer configuration of external cavity

Specifications

Parameter	Unit	Min	Typical	Max
Storage Temperature	°C	0	-	70
Operating Temperature at SAF chip	°C	5	-	45
SAF Series Resistance	Ω	-	1.1	-
SAF Forward Voltage @ LIV Current	V	-	2	-
Beam Divergence @ FWHM (θ x θ _⊥)	°	-	6 x 28	8 x 32
SAF Preferred Polarization	TE			
Mode Structure	Fundamental Mode			
Temperature Tuning Rate	nm/°C	-	0.3	-
SAF Reverse Voltage	V	-	-	0

Handling Precautions

These devices are sensitive to ESD. When handling the module, grounded work area and wrist strap must be used. Always store in an antistatic container with all leads shorted together.

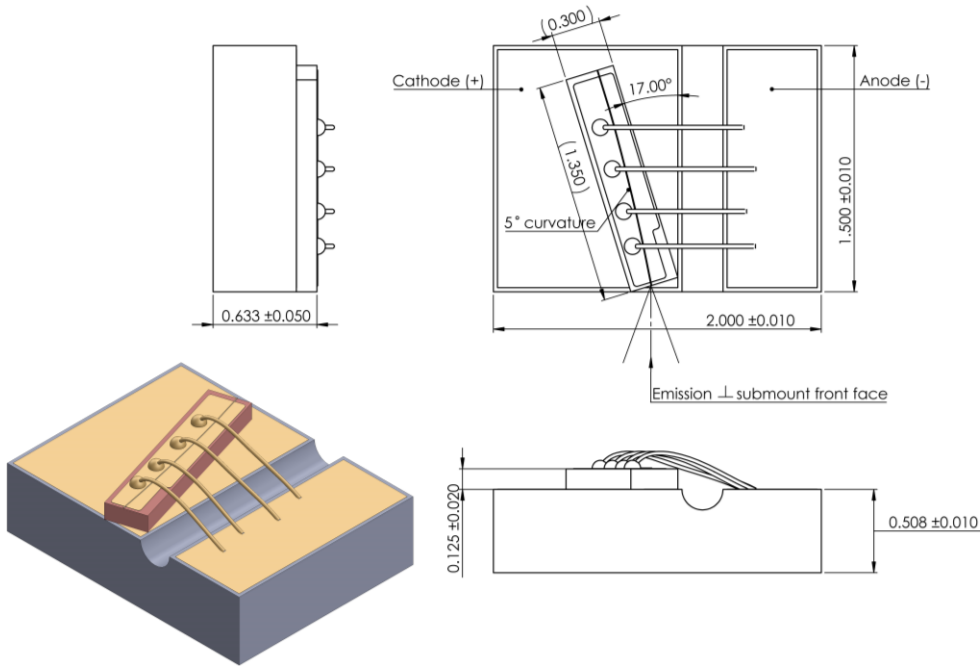


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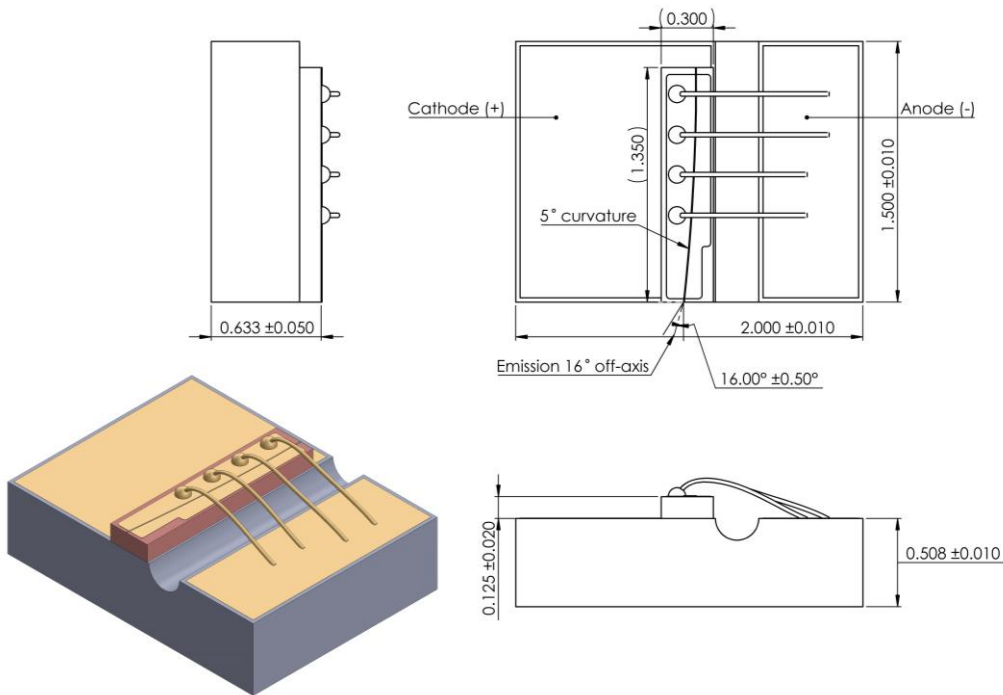
Specification Sheet | 780 nm Series

Single Angle Facet (SAF) Gain Chip

Direct Emission Drawing:



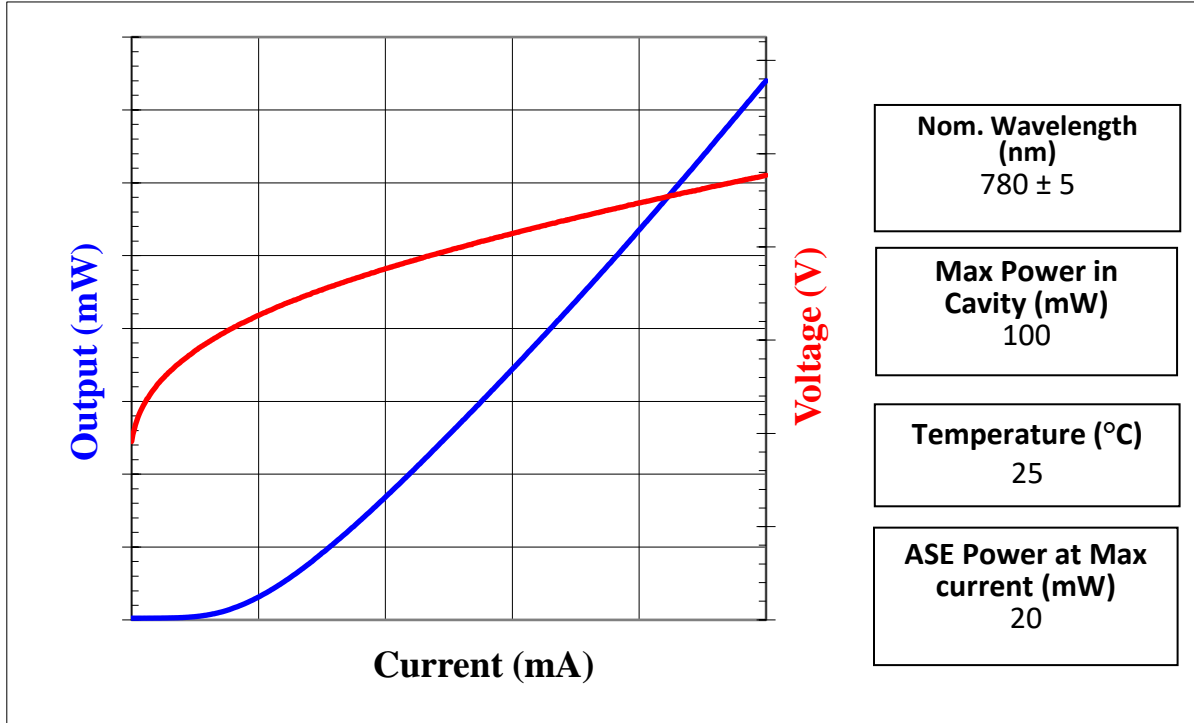
Angled Emission Drawing:



Specification Sheet | 780 nm Series

Single Angle Facet (SAF) Gain Chip

LIV Characteristics with No Seed by Current



ASE (Amplified Spontaneous Emission) Spectrum with No Seed

