

PRODUCT INFORMATION SHEET

Super Luminescent LED

➤ Product Description

The DL -CSxxxxA is a series super luminescent light emitting diode (SLED) broadband source for fiber optic gyroscope, fiber optic sensor, optical test instrument and optical coherence tomography. It provides a stable light source over a wide wavelength range include O, E, S, C and L bands.

Our products are broadband SLEDs that operate in true inherent super luminescent mode. This super luminescent property generates broader band at higher drive currents in contrast to other conventional SLEDs which are ASE-based, where high drive tends to give narrower band. Its low coherence reduces Rayleigh backscattering noise. Coupled with high power and large spectral width, it offsets photoreceiver noise and improves spatial resolution (in OCT) and measure and sensitivity (in sensors). The SLED is available in 14-pin DIL package, Box version and desktop version. It is compliance with the requirements of Telcordia GR-468-CORE.

Enabled by our spread spectra band gap engineering technology, future generations of SLEDs promise higher chip powers (up to 50mW possible), and broader spectral bands (beyond 120nm). Higher levels of integration may feature integrated SLEDs with phase modulators, optical couplers and photodetectors into a complete optical sensor chipset.

➤ Features

- High stable power output
- Single mode fiber output
- Optional BTF or DIL packaging
- Compact size
- Wide band, covers from 1250nm to 1650nm with combining multi-SLEDs

➤ Applications

- Fiber Optic Gyroscope
- Optical Test Instrument
- Fiber Optic Sensors
- Fiber Optic Communications
- Optical Coherence Tomography
- Biomedical Imaging Device
- Clinical Healing Equipment

➤ Available Models

14-Pin Butterfly package CSxxxxA	Min Power (mW)	Central wavelength (nm)	Typ. Bandwidth (nm)	Typ. spectrum modulation (dB)
CS2184A	18	1270-1290	42	0.15
CS3102A	10	1290-1330	30	0.15
CS3152A	15	1290-1330	30	0.15
CS3184A	18	1290-1330	42	0.15
CS3202A	20	1290-1330	30	0.2
CS3452A	45	1290-1330	32	0.35
CS35H5A	13	1330-1370	48	0.2
CS40H2A	15	1380-1420	35	0.2
CS43H4A	15	1415-1445	45	0.2
CS44H4A	15	1430-1470	45	0.2
CS48H5A	15	1460-1550	50	0.2
CS5037A	3	1530-1570	60	0.15
CS5077A	5	1530-1570	60	0.2
CS5107A	8	1530-1570	60	0.2
CS5103A	10	1530-1570	40	0.15
CS5153A	15	1530-1570	40	0.2
CS5203A	20	1530-1570	40	0.25
CS5254A	25	1530-1570	40	0.25
CS5403A	35	1530-1570	40	0.35
CS58M7A	5	1560-1600	58	0.15
CS6055A	5	1580-1620	55	0.15
CS6107A	8	1580-1620	60	0.15
CS62M7A	8	1600-1630	65	0.15

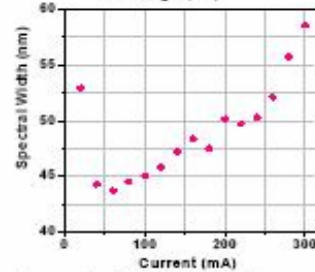
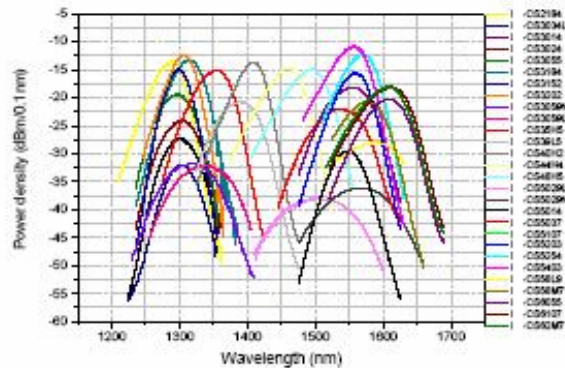
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Wavelength class (nm)	Minimum power (mW)	Typical bandwidth (nm)
1275	18	42
1310	0.3 - 20	43 - 70
1330	0.5	80
1350	15	48
1400	3 - 15	35 - 55
1440	15	45
1480	15	50
1510	0.2	100
1550	0.2 - 35	40 - 95
1600	2 - 8	55 - 65

Other Empowering Features

- High E/O efficiency for lower power consumption
- High TE/TM ratio (>20 dB possible)
- Direct Modulation up to 622 MHz
- Low Coherence Noise
- Low Spectra Ripple (0.1~0.2dB)
- True inherent superluminescent operation mode

Wide power density spread of DenseLight SLEDs

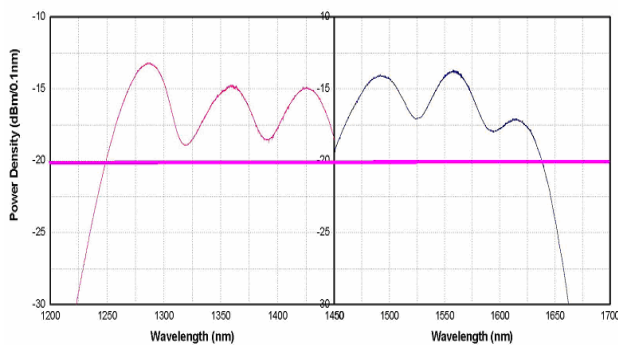


True inherent superluminescent mode generates broader bandwidth at higher drive currents in contrast to other conventional SLEDs, which are ASE-based where high drive currents tend to give a narrower band.

- (1) The full optical performance of the DL- CsxxxxA can be found in standard 14-pin Butterfly package CsxxxxA series individual specification. Please contact us for further information.
- (2) Please contact us for more available models

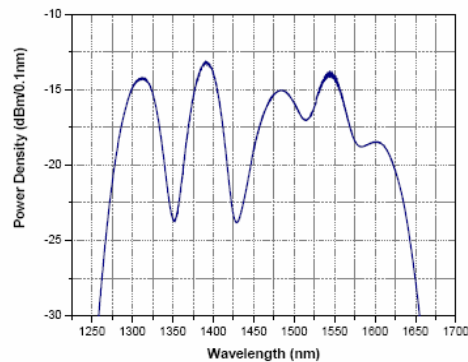
➤ Spectrum Of Combining Multi-SLEDs

6 SLED Combined Spectrum at dBm/0.1nm



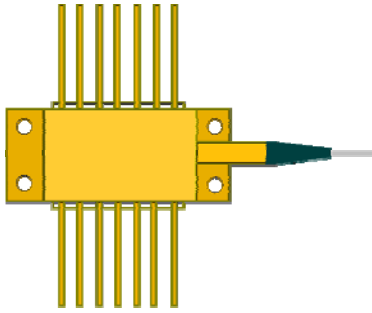
Parts used: Power density scale is in dBm/0.1nm
 CS2184A CS48H5A Power density will be 10dBm higher if use dBm/nm
 CS35H5A CS5153A
 CS43H4A CS62M7A Losses are not included

Combining 5 SLEDs at dBm/0.1nm



Combining: CS3184A (18mW); CS40H2A (18mW); CS48H5A (18mW); CS5153A (15mW); CS62M7A (10mW).
 Power density scale is in dBm/0.1nm
 Power density will be 10dBm higher if use dBm/nm
 Losses are not included

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➤ User Safety

The laser light emitted from this device is invisible and may be harmful to the human eye. Avoid looking into the output fiber when the device is in operation. The use of optical instruments with this product will increase eye hazard. Proper laser safety eyewear must be worn during operation. Improper use and failure to follow specified use may result in hazardous radiation exposure.



➤ ESD Protection

Electrostatic Discharge is the primary cause of unexpected laser diode failure. All requisite precautions should be taken to prevent ESD damage to the laser diodes.

➤ Warranty

All laser diode products are covered by a limited warranty to ensure total customer satisfaction. Please check with your sales representative for complete details. Contact us today for ordering information. Specifications are subject to change without notice.