

All-Semiconductor ASE Broadband Light Source in I²LM form



ASE-CW



ASE-IM

Product Description

THE Denselight **ASE**-series products are based on the proven performance of our **DL-CS** series of 14-PIN BUTTERFLY **SLEDS**. It is an ideal ASE Broadband Light Source solutions for applications that require **Low-DOP, Extra-wide Bandwidth** and **High Optical Power**. The **ASE**-series is a compact, high power optical laser source, complete with precise controllers for **EXCELLENT power & spectrum stability**. The ASE-series features **entire coverage of telecom spectral bands** (from O-band TO U-band) with the ability to directly intensity modulate.

Features

- Wide spectral coverage (1200nm - 1700nm)
- Customized ASE design and spectrum combination (e.g. return sensing signal port, monitoring optical coupler, etc.)
- Compact form factor design
- **CW** operation (**DL-ASE-CW-Series**) or **Direct-modulation** operation (**DL-ASE-IM-Series**)
- Fiber pigtail or FC receptacle output
- Improved reliability by integrated optical isolator
- Over-temperature protection and internal PCB temperature monitor
- Remote optical power enabled function by active-low logic
- Standard operating temperature: 0°C to 60°C typical. Extended range -20 °C to 70 °C
- Telcordia certification, RoHS Compliance

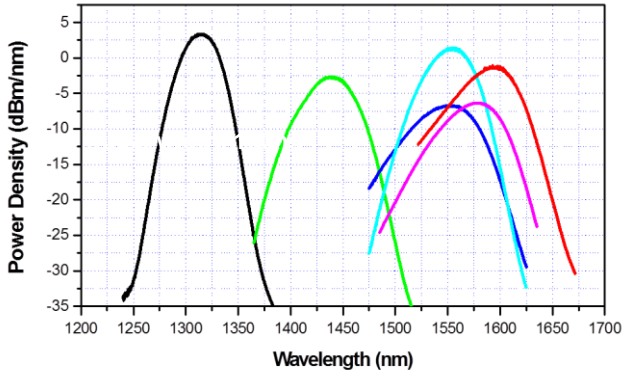
Performance

- Low-DOP < 5%
- High optical power up to 19dBm
- Consistent spectral power density across wide bandwidth (up to 120nm)
- Excellent power stability <0.01dB
- Analog modulation (up to 20MHz)
- Digital modulation (up to 200MHz)

Model Selection Guide

Telecom Band	Product Code	SLED Type	Wavelength Range	CWL	Band width	Power	Power Density	Usage Mode	Spectral Symmetry
			(nm)	(+/- 20 nm)	3dB	dBm	dBm/nm		Gaussian
O Band (1260 - 1360 nm)	DL-ASE-CW-CSO 193A	DL-CS-3452A-FP	1285 - 1335	1310	32	19	-6.5	CW	Yes
	DL-ASE-CW-CSO 157A	DL-CS-3207A-FP	1265 - 1365	1310	50	15	-12.5	CW	Yes
	DL-ASE-CW-CSO 139A	DL-CS-3159A-FP	1250 - 1350	1310	75	13.5	-7.5	CW	Yes
	DL-ASE-CW-CSO 119A	DL-CS-3159A-FP	1250-1350	1310	75	11	-12.5	CW	Yes
	DL-ASE-CW-CSOE 109A	DL-CS-2079A-FP DL-CS-35H5A-FP	1235-1380	1310	120	10	-15	CW	No
E Band (1360 - 1460 nm)	DL-ASE-CW-CSE 145A	DL-CS-44H5A-FP	1420 - 1460	1450	50	14	-7.5	CW	Yes
S Band (1460 – 1530 nm)	DL-ASE-CW-CSS 145A	DL-CS-48H5A-FP	1470-1506	1480	50	13.5	-9	CW	Yes
S-C Band (1460-1565 nm)	DL-ASE-CW-CSSC 129A	DL-CS-53109A	1470-1565	1530	80	12	-10	CW	Yes
C Band (1530 – 1565 nm)	DL-ASE-CW-CSC 183A	DL-DL-CS5403A-FP	1525 - 1565	1550	35	18	-3.5	CW	Yes
	DL-ASE-CW-CSC 164A	DL-CS-5254A-FP	1525- 1565	1550	40	16	-5	CW	Yes
	DL-ASE-CW-CSC 147A	DL-CS-5107A-FP	1510- 1590	1550	60	15	-7.5	CW	Yes
	DL-ASE-CW-CSC 119A	DL-CS-5169A-FP	1510- 1590	1550	80	11.5	-9	CW	Yes
	DL-ASE-CW-CSC 117A	DL-CS-5107A-FP	1525 - 1565	1550	60	11	-10	CW	Yes
	DL-ASE-CW-CSC 107A	DL-CS-5107A-FP	1526 - 1565	1550	60	10	-11	IM	Yes
	DL-ASE-CW-CSC 143A	DL-CS-5254A-FP	1525 - 1565	1550	40	14	-8	CW	Yes
C-L Band (1525-1625 nm)	DL-ASE-CW-CSC 117A	DL-CS 58M7A-FP	1527 - 1610	1580	58	11	-15	CW	Yes
	DL-ASE-IM-CSCL 107A	DL-CS 58M7A-FP	1526 - 1625	1580	58	10	-16	IM	Yes
L Band (1565 – 1625 nm)	DL-ASE-CW-CSL 165A	DL-CS60H5A-FP	1525-1610	1600	50	16	-6	CW	Yes
U Band (1625 – 1675 nm)	DL-ASE-CW-CSU 125A	DL-CS65M5A-FP	1651-1691	1650	50	11.5	-13	CW	Yes
	DL-ASE-CW-CSU 125A	DL-CS65M5A-FP	1625-1675	1650	50	11.5	-9	CW	Yes
	DL-ASE-CW-CSU 135A	DL-CS69M5A-FP	1645-1710	1690	50	13	-10	CW	Yes

Wide Spectral Coverage



Physical & Mechanical Specifications

- | | |
|----------------------------|------------------------|
| ▪ DL-ASE-CW Dimension: | L100 x W80 x H20 mm |
| ▪ DL-ASE-IM Dimension: | L100 x W88 x H22.5 mm |
| ▪ Optical Output: | SMF Pigtail/Receptacle |
| ▪ Enclosure: | Metal Case |
| ▪ Cooling: | Air-Cooled |
| ▪ Connector Type: | FC/APC |
| ▪ Electrical Power supply: | 5V DC |

Extra Features in DL-ASE-CW Series

- Over temperature protection and internal PCB temperature monitor
- Active-Low optical power enabled function
- Extendable Operating temperature up to 70 °C
- Fiber Pigtail Output

Extra Features in DL-ASE-IM Series

- Over temperature protection and internal PCB temperature monitor
- Pre-bias optical power
- Analog intensity modulation up to 20MHz
- Pulse or digital modulation up to 200MHz

Applications

Medical Technology

- OCT (biopsies-less medical cell imaging, diagnostic imaging), point of use/ handhelds/ non-invasive diagnosis (blood analysis)

Structure Health Monitoring (SHM)

- sensing in gas & oil production, telemetry in electricity distribution (FOS)
- physical (temp, pressure, strain, vibrations), structural and civil engineering, smart structures, intelligent distributed sensing (DTS & DTSS)

Test & Measurement

- in-line production process monitoring, 3D metrology and surface metrology, semiconductor fabrication (solar cells)

Communications

- affordable gigabit bandwidth fiber-link to homes and business (FTTX), test & measurement for telecom network

Defense & Security

- perimeter defense, navigation and guidance - inertia sensing (gyroscope), infrared illumination for surveillance and speckle-free military imaging