



All-Semiconductor ASE Broadband Light Source

DenseLight DL-ASE is a series of all-semiconductor low DOP ASE optical sources with a wide selection of wavelengths, covering the entire telecom spectral bands (from O to U). The CW output standard model comes with excellent stability in output power and spectrum. As it operates on direct light generation from superluminescent principle (SLED), it can be directly intensity modulated. Modulation models are available upon request, as well as custom models to meet your specific needs.

- **Low-DOP capability <5%**
- **High optical power up to 19dBm**
- **Consistent spectral power density across wide bandwidth (up to 120nm)**
- **Excellent power stability <0.01dB**
- **Analog modulation (f3dB~20MHz)**
- **Digital modulation (tr<1ns)**



ASE (IM)



ASE (CW)

APPLICATIONS

- *OCT, non invasive analysis*
- *SHM – sensing in gas & oil*
- *FOS*
- *T&M*
- *Communications*
- *Defense & Security*

PRODUCT DESCRIPTION

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
- Optical Output - SMF Fiber Pigtail Output

DL-ASE-IM Series

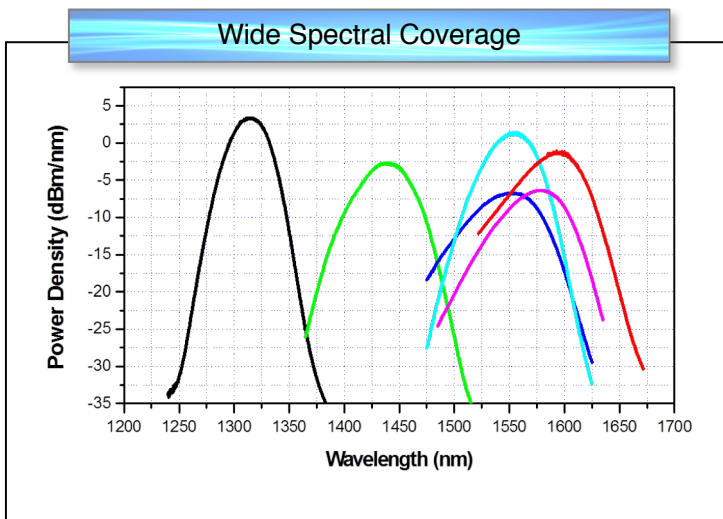
- Over temperature protection and internal PCB temperature monitor
- Pre-bias optical power
- Analog intensity modulation up to 20MHz
- Pulse or digital modulation up to 200MHz
- Optical Output – FC Receptacle

FEATURES & PERFORMANCE

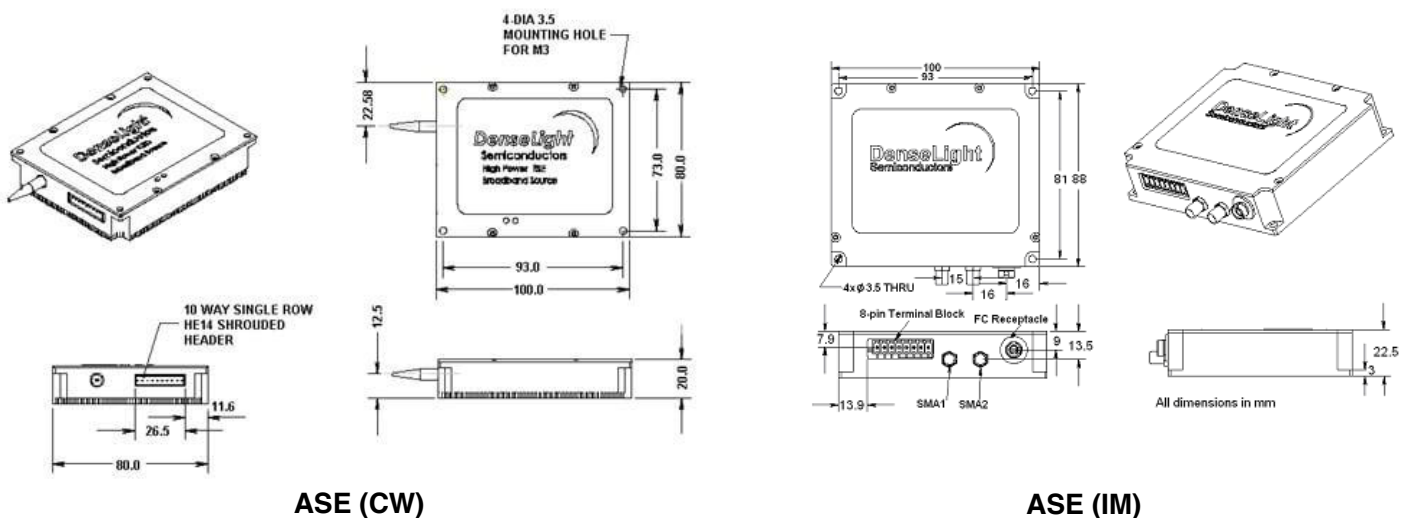
- Wide spectral coverage, 1200nm-1700nm
- Customized ASE design and spectrum combination (e.g. return sensing signal port, monitoring optical coupler, etc.)
- **CW operation (DL-ASE-CW-Series) or Direct-modulation operation (DL-ASE-IM-Series)**
- Fiber pigtail or FC receptacle output
- Improved reliability by integrated optical isolator
- Remote optical power enabled function by active-low logic
- Standard operating temperature: 0°C to 65°C. Extended range -20°C to 70°C
- Telcordia certification, RoHS Compliance

APPLICATIONS

Medical Technology	<ul style="list-style-type: none"> OCT (biopsies-less medical cell imaging, diagnostic imaging), point of use/ handhelds/ non-invasive diagnosis (blood analysis)
Structure Health Monitoring (SHM)	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> in-line production process monitoring, 3D metrology and surface metrology, semiconductor fabrication (solar cells)
Communications	<ul style="list-style-type: none"> affordable gigabit bandwidth fiber-link to homes and business (FTTX), test & measurement for telecom network
Defense & Security	<ul style="list-style-type: none"> perimeter defense, navigation and guidance - inertia sensing (gyroscope), infrared illumination for surveillance and speckle-free military imaging



PHYSICAL & MECHANICAL SPECIFICATION



MODULE 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