



Redefining Spectral Boundaries

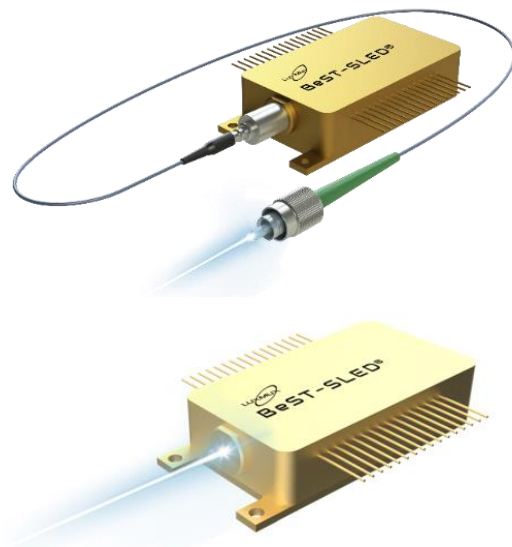
BeST-SLED®

Optical Spectral Engine G2 (OSE2) - Product Brief

Luxmux's BeST-SLED® (superluminescent diodes) is a compact broadband light source that operates in the near-infrared region. The product itself is a 32-pin butterfly package that uses a set of superluminescent diodes, one monitor diode for each SLED (enabling better power control and monitoring capabilities), a thermoelectric cooler (TEC), an integrated isolator, and a spectral stitching design to provide overlapping spectral coverage. The BeST-SLED can be configured with up to six light sources.

The OSE2 offers spectral coverage from 1265nm to 1725nm, with up to 40mW of optical power. This product enables stable power and center-wavelength performance over time, and steady optical performance over a wide spectrum of wavelengths. A proprietary spectral stitching technique across the spectral range. The OSE2 is compact and easy to use, making it an appropriate fit for many different types of manufactured assemblies requiring light power.

The BeST-SLED uses Luxmux's spectral stitching technique of integrating multiple wavelengths into a single broad spectrum, designed for optimum coupling efficiency. These compact, high-bandwidth modules provide the optimum power and highest optical density bandwidth in a single fiber system in the industry. The BeST-SLED product lines can be spectrally tailored to suit specific application needs. This provides exceptional flexibility and usability, making these sources ideal for the applications included below:



KEY FEATURES

- Between two and six superluminescent diodes (SLEDs) in a single unit
- All SLEDs can be run from 0-100% of maximum rating
- Fiber-coupled output power from 12mW to 40mW, Free Space output power from 35mW to 130mW
- Bandwidth FWHM from 100nm to 460nm
- Spectral coverage from 1265nm to 1725nm
- Luxmux's patented technology for spectral stitching provides optimum power and bandwidth
- Each SLED comes with a built-in independent monitor photodiode and one common thermoelectric cooler (TEC) for all SLEDs
- Light output: FC/APC Connector (Optional FC/PC or SMA)

APPLICATIONS

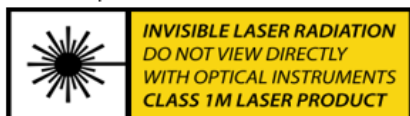
- Optical Component Testing
- Telecom Test Equipment
- Medical Optical Coherence Tomography
- Industrial Optical Coherence Tomography
- Industrial Optical Coherence Tomography
- Biomedical Imaging Systems
- Optical Sensing
- White Light Interferometry & Chromatic Dispersion
- Research and Development

LASER TYPE ORDERING OPTION

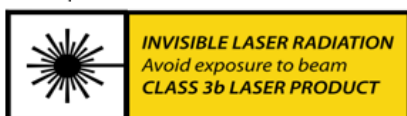
- Free Space: for applications that do not require fiber optic coupling, higher-power free space models are available. Free

space models will deliver a collimated beam out of the unit. Refer to ordering code free space section for output powers available.

Fibre-Coupled Products



Free-Space Products



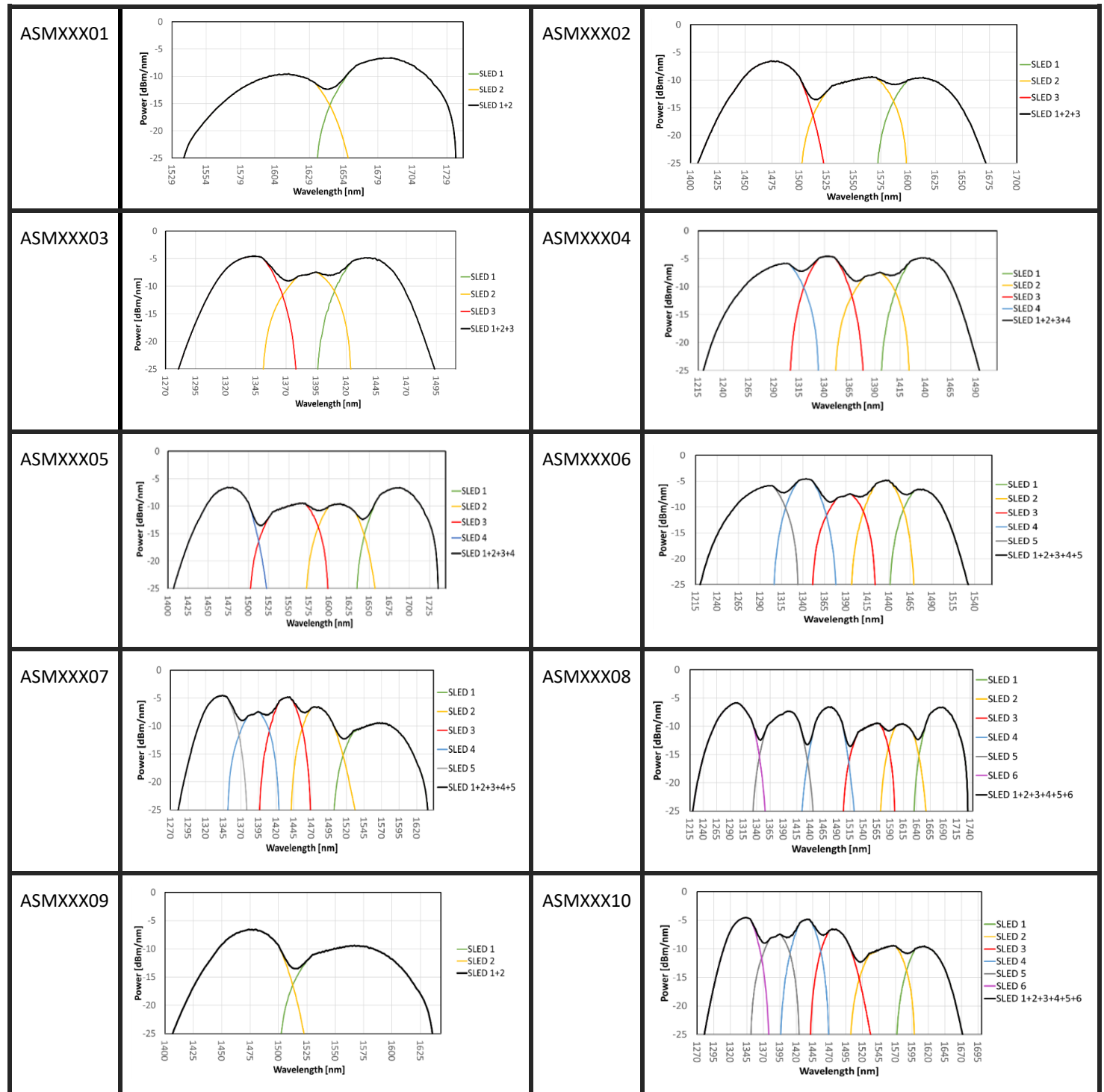
KEY MEASUREMENTS

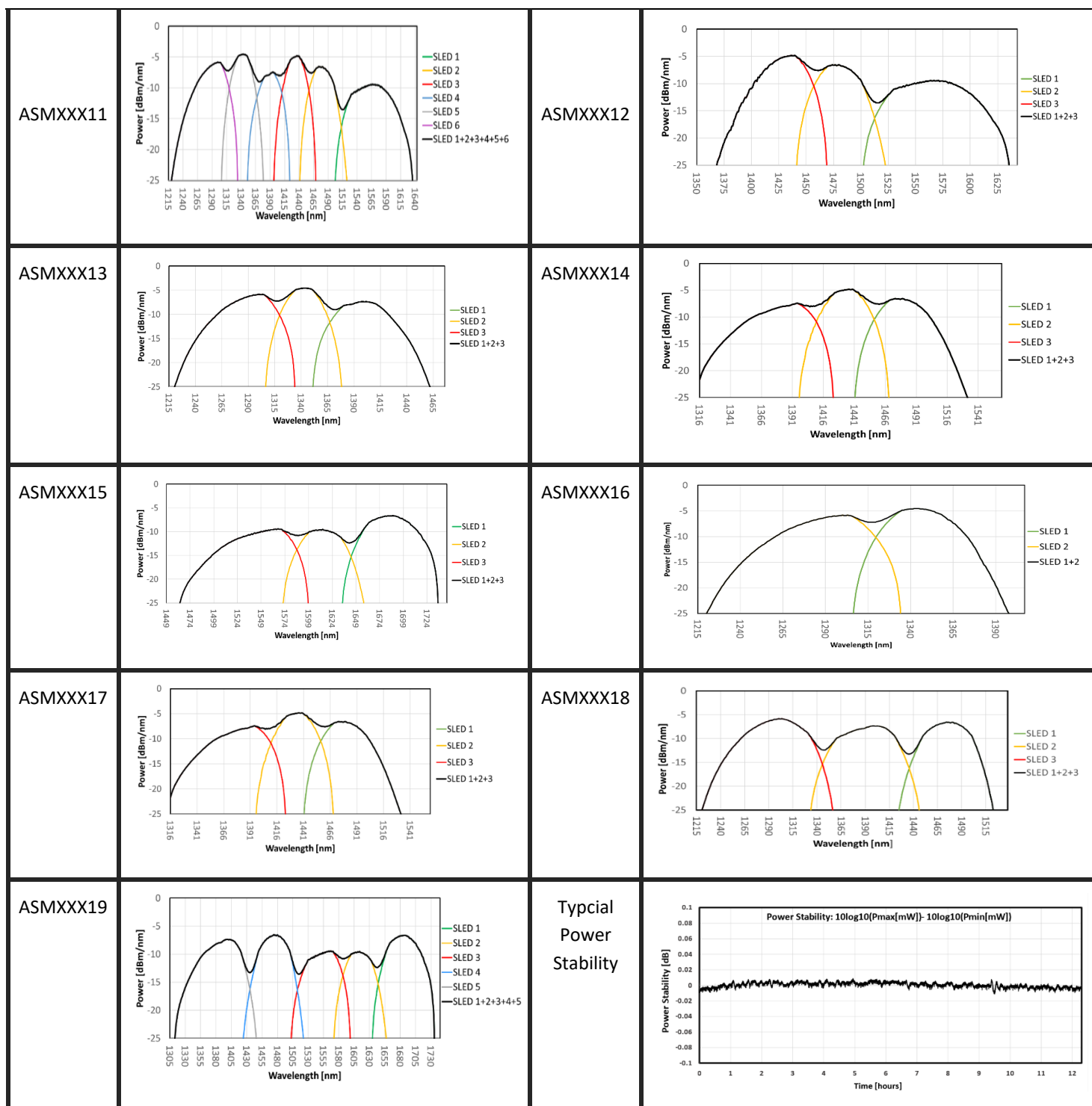
Part Number	SLEDs	Spectral Coverage (SC)	Full-Width Half-Maximum (FWHM)	Center Wavelength (CW)	Light Output Power (LOP)	
					Fiber Coupled (mW)	Free Space (mW)
ASMXXX01	1615nm, 1680nm	1575nm- 1725nm	150nm	1650nm	12mW	35mW
ASMXXX02	1480nm, 1550nm, 1615nm	1435nm – 1640nm	205nm	1538nm	18mW	55mW
ASMXXX03	1340nm, 1390nm, 1430nm	1310nm – 1465nm	155nm	1388nm	20mW	65mW
ASMXXX04	1300nm, 1340nm, 1390nm, 1430nm	1265nm – 1465nm	200nm	1365nm	25mW	90mW
ASMXXX05	1480nm, 1550nm, 1615nm, 1680nm	1435nm – 1725nm	290nm	1580nm	25mW	80mW
ASMXXX06	1300nm, 1340nm, 1390nm, 1430nm, 1480nm	1265nm – 1500nm	235nm	1383nm	35mW	115mW
ASMXXX07	1340nm, 1390nm, 1430nm, 1480nm, 1550nm	1305nm – 1605nm	300nm	1455nm	35mW	110mW
ASMXXX08	1300nm, 1390nm, 1480nm, 1550nm, 1615nm, 1680nm	1265nm – 1725nm	460nm	1495nm	40mW	125mW
ASMXXX09	1480nm, 1550nm	1435nm – 1605nm	170nm	1520nm	12mW	45mW
ASMXXX10	1340nm, 1390nm, 1430nm, 1480nm, 1550nm, 1615nm	1310nm – 1640nm	330nm	1475nm	38mW	120mW
ASMXXX11	1300nm, 1340nm, 1390nm, 1430nm, 1480nm, 1550nm	1265nm – 1605nm	340nm	1435nm	40mW	130mW
ASMXXX12	1430nm, 1480nm, 1550nm	1410nm – 1605nm	195nm	1508nm	19mW	60mW
ASMXXX13	1300nm, 1340nm, 1390nm	1265nm – 1420nm	155nm	1343nm	20mW	70mW
ASMXXX14	1390nm, 1430nm, 1480nm	1355nm – 1500nm	145nm	1428nm	19mW	65mW
ASMXXX15	1550nm, 1615nm, 1680nm	1515nm – 1725nm	210nm	1620nm	18mW	55mW
ASMXXX16	1300nm, 1340nm	1265nm – 1365nm	100nm	1315nm	12mW	50mW
ASMXXX17	1390nm, 1480nm, 1550nm	1340nm – 1610nm	270nm	1475nm	20mW	60mW
ASMXXX18	1300nm, 1390nm, 1480nm	1265nm – 1500nm	235nm	1383nm	20mW	70mW
ASMXXX19	1390nm, 1480nm, 1550nm, 1615nm, 1680nm	1340nm – 1725nm	385nm	1533nm	32mW	100mW

Additional Information:

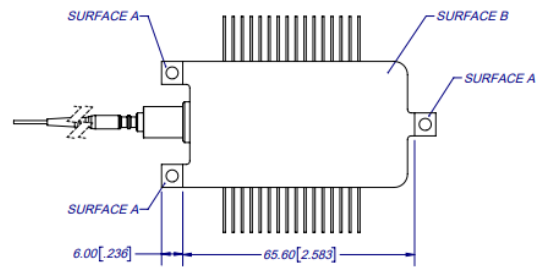
- Each product includes one of three different light output mechanisms (PM: polarization maintaining Fiber, SM: single mode fiber, or FS: free space), and are a high-degree of polarization output.
- XXX (e.g., ASMXXX01) has been used as a placeholder for this table. For a full ordering code for each specific product, see ORDERING CODE table below.
- A Heat Sink is highly recommended to achieve optimum performance. Use of the OSE without a heatsink can void the warranty performance of the OSE. Please refer to the BeST-SLED OSE datasheet for achieving proper thermal performance.

TYPICAL SPRECTRUMS FIBER COUPLED MODELS



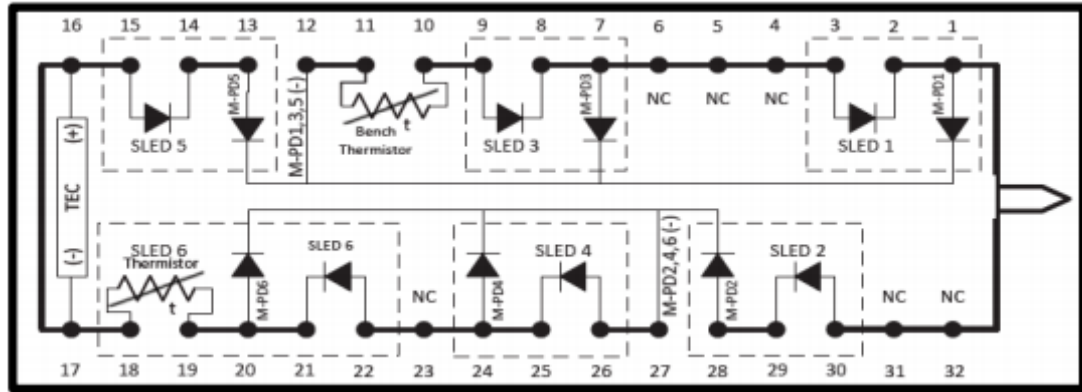


BeST-SLED – Free Space



PIN OUT

External Pin Assignment – BeST-SLED: 6 SLEDs							
1	M-PD1 (+)	9	SLED 3 (+)	17	TEC (-)	25	SLED 4 (-)
2	SLED 1 (-)	10	Thermistor	18	SLED 6 Thermistor	26	SLED 4 (+)
3	SLED 1 (+)	11	Thermistor	19	Sled 6 Thermistor	27	M-PD2,4,6 (-)
4	NC	12	M-PD1,3,5 (-)	20	M-PD6 (+)	28	M-PD2 (+)
5	NC	13	M-PD5	21	SLED 6 (-)	29	SLED 2 (-)
6	NC	14	SLED 5 (-)	22	SLED 6 (+)	30	SLED 2 (+)
7	M-PD3 (+)	15	SLED 5 (+)	23	NC	31	NC
8	SLED 3 (-)	16	TEC (+)	24	M-PD4 (+)	32	NC



ORDERING CODE

ORDERING CODE:		LTC	OSE2	SLEDs	FT	DOP	SC	FWHM	CW	LOP
LTC	Luxmux Technology Corporation									
OSE2	Best-SLED® OSE G2									
SLEDs	SLED center wavelength, choose from one of the models in the table 1300nm, 1340nm, 1390nm, 1430nm, 1480nm, 1550nm, 1615nm, 1680nm [choose up to 6]									
FT	Fiber Type, choose 1: PM: Polarization Maintaining SM: Single Mode FS: Free Space									
DOP	HP: High Degree of Polarization									
SC	Spectral Coverage [nm]									
FWHM	Full Width Half Maximum [nm] (FWHM defined as the bandwidth from the lowest spectral dip)									
CW	Center Wavelength [nm]									
LOP	Light Output Power [mW]									

Product Code

Available Options

Taken From Table

POLARIZATION MAINTAINING								
Part Number	Ordering Code: LTC-OSE2-(SLEDs)-(FT)-(LOP)-(SC)-(FWHM)-(CW)-(FOP)	SLEDs [nm]	Fiber Type (FT)	Degree of Polarization (DOP)	Spectral Coverage (SC) [nm]	Full-Width Half-Maximum (FWHM) [nm]	Center Wavelength (CW) [nm]	Light Output Power (LOP) [mW]
ASM000001	LTC-OSE2-1615_1680-PM-HP-1575_1725_150-1650-12	1615, 1680	PM	High	1575 – 1725	150	1650	12
ASM000002	LTC-OSE2-1480_1550_1615-PM-HP-1435_1640-205-1538-18	1480, 1550, 1615	PM	High	1435 – 1640	205	1538	18
ASM000003	LTC-OSE2-1340_1390_1430-PM-HP-1310_1465-155-1388-20	1340, 1390, 1430	PM	High	1310 – 1465	155	1388	20
ASM000004	LTC-OSE2-1300_1340_1390_1430-PM-HP-1265_1465-200-1365-25	1300, 1340, 1390, 1430	PM	High	1265 – 1465	200	1365	25
ASM000005	LTC-OSE2-1480_1550_1615_1680-PM-HP-1435_1725-290-1580-25	1480, 1550, 1615, 1680	PM	High	1435 – 1725	290	1580	25
ASM000006	LTC-OSE2-1300_1340_1390_1430_1480-PM-HP-1265_1500-235-1383-35	1300, 1340, 1390, 1430, 1480	PM	High	1265 – 1500	235	1383	35
ASM000007	LTC-OSE2-1340_1390_1430_1480_1550-PM-HP-1305_1605-300-1455-35	1340, 1390, 1430, 1480, 1550	PM	High	1305 – 1605	300	1455	35
ASM000008	LTC-OSE2-1300_1390_1480_1550_1615_1680-PM-HP-1265_1725-460-1495-40	1300, 1390, 1480, 1550, 1615, 1680	PM	High	1265 – 1725	460	1495	40
ASM000009	LTC-OSE2-1480_1550-PM-HP-1435_1605-170-1520-12	1480, 1550	PM	High	1435 – 1605	170	1520	12
ASM000010	LTC-OSE2-1340_1390_1430_1480_1550_1615-PM-HP-1310_1640-330-1475-38	1340, 1390, 1430, 1480, 1550, 1615	PM	High	1310 – 1640	330	1475	38
ASM000011	LTC-OSE2-1300_1340_1390_1430_1480_1550-PM-HP-1265_1605-340-1435-40	1300, 1340, 1390, 1430, 1480, 1550	PM	High	1265 – 1605	340	1435	40
ASM000012	LTC-OSE2-1430_1480_1550-PM-HP-1410_1605-195-1508-19	1430, 1480, 1550	PM	High	1410 – 1605	195	1508	19
ASM000013	LTC-OSE2-1300_1340_1390-PM-HP-1265_1420-155-1343-20	1300, 1340, 1390	PM	High	1265 – 1420	155	1343	20
ASM000014	LTC-OSE2-1390_1430_1480-PM-HP-1355_1500-145-1428-19	1390, 1430, 1480	PM	High	1355 – 1500	145	1428	19
ASM000015	LTC-OSE2-1550_1615_1680-PM-HP-1515_1725-210-1620-18	1550, 1615, 1680	PM	High	1515 – 1725	210	1620	18
ASM000016	LTC-OSE2-1300_1340-PM-HP-1265_1365-100-1315-12	1300, 1340	PM	High	1265 – 1365	100	1315	12
ASM000017	LTC-OSE2-1390_1480_1550-PM-HP-1340_1610-270-1475-20	1390, 1480, 1550	PM	High	1340 – 1610	270	1475	20
ASM000018	LTC-OSE2-1300_1390_1480-PM-HP-1265_1500-235-1383-20	1300, 1390, 1480	PM	High	1265 – 1500	235	1383	20
ASM000019	LTC-OSE2-1390_1480_1550_1615_1680-PM-HP-1340_1725-385-1533-32	1390, 1480, 1550, 1615, 1680	PM	High	1340 – 1725	385	1533	32

SINGLE MODE								
Part Number	Ordering Code: LTC-OSE2-(SLEDs)-(FT)-(LOP)-(SC)-(FWHM)-(CW)-(FOP)	SLEDs [nm]	Fiber Type (FT)	Degree of Polarization (DOP)	Spectral Coverage (SC) [nm]	Full-Width Half-Maximum (FWHM) [nm]	Center Wavelength (CW) [nm]	Light Output Power (LOP) [mW]
ASM000101	LTC-OSE2-1615_1680-SM-HP-1575_1725-150-1650-12	1615, 1680	SM	High	1575 – 1725	150	1650	12
ASM000102	LTC-OSE2-1480_1550_1615-SM-HP-1435_1640-205-1538-18	1480, 1550, 1615	SM	High	1435 – 1640	205	1538	18
ASM000003	LTC-OSE2-1340_1390_1430-SM-HP-1310_1465-155-1388-20	1340, 1390, 1430	SM	High	1310 – 1465	155	1388	20
ASM000104	LTC-OSE2-1300_1340_1390_1430-SM-HP-1265_1465-200-1365-25	1300, 1340, 1390, 1430	SM	High	1265 – 1465	200	1365	25
ASM000105	LTC-OSE2-1480_1550_1615_1680-SM-HP-1435_1725-290-1580-25	1480, 1550, 1615, 1680	SM	High	1435 – 1725	290	1580	25
ASM000106	LTC-OSE2-1300_1340_1390_1430_1480-SM-HP-1265_1500-235-1383-35	1300, 1340, 1390, 1430, 1480	SM	High	1265 – 1500	235	1383	35
ASM000107	LTC-OSE2-1340_1390_1430_1480_1550-SM-HP-1305_1605-300-1455-35	1340, 1390, 1430, 1480, 1550	SM	High	1305 – 1605	300	1455	35
ASM000108	LTC-OSE2-1300_1390_1480_1550_1615_1680-SM-HP-1265_1725-460-1495-40	1300, 1390, 1480, 1550, 1615, 1680	SM	High	1265 – 1725	460	1495	40
ASM000109	LTC-OSE2-1480_1550-SM-HP-1435_1605-170-1520-12	1480, 1550	SM	High	1435 – 1605	170	1520	12
ASM000110	LTC-OSE2-1340_1390_1430_1480_1550_1615-SM-HP-1310_1640-330-1475-38	1340, 1390, 1430, 1480, 1550, 1615	SM	High	1310 – 1640	330	1475	38
ASM000111	LTC-OSE2-1300_1340_1390_1430_1480_1550-SM-HP-1265_1605-340-1435-40	1300, 1340, 1390, 1430, 1480, 1550	SM	High	1265 – 1605	340	1435	40
ASM000112	LTC-OSE2-1430_1480_1550-SM-HP-1410_1605-195-1508-19	1430, 1480, 1550	SM	High	1410 – 1605	195	1508	19
ASM000113	LTC-OSE2-1300_1340_1390-SM-HP-1265_1420-155-1343-20	1300, 1340, 1390	SM	High	1265 – 1420	155	1343	20
ASM000114	LTC-OSE2-1390_1430_1480-SM-HP-1355_1500-145-1428-19	1390, 1430, 1480	SM	High	1355 – 1500	145	1428	19
ASM000115	LTC-OSE2-1550_1615_1680-SM-HP-1515_1725-210-1620-18	1550, 1615, 1680	SM	High	1515 – 1725	210	1620	18
ASM000116	LTC-OSE2-1300_1340-SM-HP-1265_1365-100-1315-12	1300, 1340	SM	High	1265 – 1365	100	1315	12
ASM000117	LTC-OSE2-1390_1480_1550-SM-HP-1340_1610-270-1475-20	1390, 1480, 1550	SM	High	1340 – 1610	270	1475	20
ASM000118	LTC-OSE2-1300_1390_1480-SM-HP-1265_1500-235-1383-20	1300, 1390, 1480	SM	High	1265 – 1500	235	1383	20
ASM000119	LTC-OSE2-1390_1480_1550_1615_1680-SM-HP-1340_1725-386-1533-32	1390, 1480, 1550, 1615, 1680	SM	High	1340 – 1725	386	1533	32

FREE SPACE								
Part Number	Ordering Code: LTC-OSE2-(SLEDs)-(FT)-(LOP)-(SC)-(FWHM)-(CW)-(FOP)	SLEDs [nm]	Fiber Type (FT)	Degree of Polarization (DOP)	Spectral Coverage (SC) [nm]	Full-Width Half-Maximum (FWHM) [nm]	Center Wavelength (CW) [nm]	Light Output Power (LOP) [mW]
ASM000201	LTC-OSE2-1615_1680-FS-HP-1575_1725-150-1650-35	1615, 1680	FS	High	1575 – 1725	150	1650	35
ASM000202	LTC-OSE2-1480_1550_1615-FS-HP-1435_1640-205-1538-55	1480, 1550, 1615	FS	High	1435 – 1640	205	1538	55
ASM000203	LTC-OSE2-1340_1390_1430-FS-HP-1310_1465-155-1388-65	1340, 1390, 1430	FS	High	1310 – 1465	155	1388	65
ASM000204	LTC-OSE2-1300_1340_1390_1430-FS-HP-1265_1465-200-1365-90	1300, 1340, 1390, 1430	FS	High	1265 – 1465	200	1365	90
ASM000205	LTC-OSE2-1480_1550_1615_1680-FS-HP-1435_1725-290-1580-80	1480, 1550, 1615, 1680	FS	High	1435 – 1725	290	1580	80
ASM000206	LTC-OSE2-1300_1340_1390_1430_1480-FS-HP-1265_1500-235-1383-115	1300, 1340, 1390, 1430, 1480	FS	High	1265 – 1500	235	1383	115
ASM000207	LTC-OSE2-1340_1390_1430_1480_1550-FS-HP-1305_1605-300-1455-110	1340, 1390, 1430, 1480, 1550	FS	High	1305 – 1605	300	1455	110
ASM000208	LTC-OSE2-1300_1390_1480_1550_1615_1680-FS-HP-1265_1725-460-1495-125	1300, 1390, 1480, 1550, 1615, 1680	FS	High	1265 – 1725	460	1495	125
ASM000209	LTC-OSE2-1480_1550-FS-HP-1435_1605-170-1520-45	1480, 1550	FS	High	1435 – 1605	170	1520	45
ASM000210	LTC-OSE2-1340_1390_1430_1480_1550_1615-FS-HP-1310_1640-330-1475-120	1340, 1390, 1430, 1480, 1550, 1615	FS	High	1310 – 1640	330	1475	120
ASM000211	LTC-OSE2-1300_1340_1390_1430_1480_1550-FS-HP-1265_1605-340-1435-130	1300, 1340, 1390, 1430, 1480, 1550	FS	High	1265 – 1605	340	1435	130
ASM000212	LTC-OSE2-1430_1480_1550-FS-HP-1410_1605-195-1508-60	1430, 1480, 1550	FS	High	1410 – 1605	195	1508	60
ASM000213	LTC-OSE2-1300_1340_1390-FS-HP-1265_1420-155-1343-70	1300, 1340, 1390	FS	High	1265 – 1420	155	1343	70
ASM000214	LTC-OSE2-1390_1430_1480-FS-HP-1355_1500-145-1428-65	1390, 1430, 1480	FS	High	1355 – 1500	145	1428	65
ASM000215	LTC-OSE2-1550_1615_1680-FS-HP-1515_1725-210-1620-55	1550, 1615, 1680	FS	High	1515 – 1725	210	1620	55
ASM000216	LTC-OSE2-1300_1340-FS-HP-1265_1365-100-1315-50	1300, 1340	FS	High	1265 – 1365	100	1315	50
ASM000217	LTC-OSE2-1390_1480_1550-FS-HP-1340_1610-270-1475-60	1390, 1480, 1550	FS	High	1340 – 1610	270	1475	60
ASM000218	LTC-OSE2-1300_1390_1480-FS-HP-1265_1500-235-1383-70	1300, 1390, 1480	FS	High	1265 – 1500	235	1383	70
ASM000219	LTC-OSE2-1390_1480_1550_1615-FS-HP-1340_1725-385-1533-100	1390, 1480, 1550, 1615, 1680	FS	High	1340 – 1725	385	1533	100