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# Connectorized ELEDs

## Technical Data

### LST0X00

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#### Features

- Industry Standard FC and ST® Connectors
- 1300 nm Wavelength
- Linewidth <110 nm
- High Reliability
- Range of Flange Options
- -40°C to +80°C Operation

#### Applications

- Optical Data Communication Transmitters
- E-O Convertors
- LANS
- FDDI Networks
- FITL
- Single Mode: LST0400
- Multimode: LST0500

#### Description

The LST range of products includes a wide variety of connectorized ELED emitters for both single mode and multimode operation. The products have been developed for low cost and wide operating temperature applications such as telecom FITL and datacom FDDI LANS. Variants are available in industry standard connector types with a selection of mounting flange options.

The product range features a high reliability ridge waveguide ELED manufactured using our MOVPE process. The construction of the products includes a hermetically sealed ELED and is designed to be compatible with the environmental requirements of the Bellcore TA-TSY-000983 document.



## Absolute Maximum Ratings

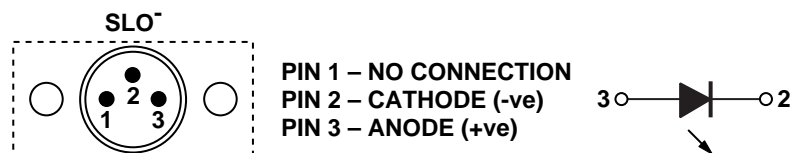
Absolute maximum limits mean that no catastrophic damage will occur if the product is subjected to these ratings for short periods, provided each limiting parameter is in isolation and all other parameters have values within the performance specification. It should not be assumed that limiting values of more than one parameter can be applied to the product at the same time.

| Parameter             | Symbol | Conditions | Limits |     | Units |
|-----------------------|--------|------------|--------|-----|-------|
|                       |        |            | Min    | Max |       |
| Forward Current       | If     | DC         | -      | 175 | mA    |
| Reverse Voltage       | Vr     | DC         | -      | 2   | V     |
| Operating Temperature | Tc     |            | -40    | +80 | °C    |
| Storage Temperature   | Ts     |            | -40    | +85 | °C    |
| Soldering             |        | 10 seconds | -      | 260 | °C    |

## Performance Specification

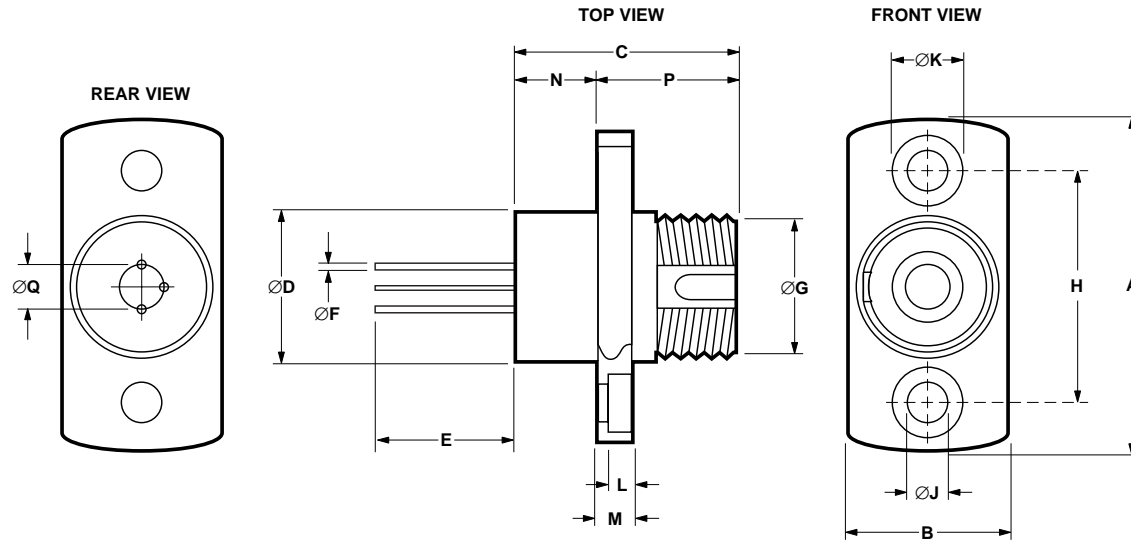
| Parameter                   | Symbol | Test Conditions                                   | Minimum | Maximum | Units |
|-----------------------------|--------|---|---------|---------|-------|
|                             |        | CW, Tc = 25°C, If = 100mA unless otherwise stated |         |         |       |
| Launched Optical Power      | Po     | LST0400: into 9/125 fiber                         | 5       | 12      | μW    |
|                             |        | LST0500: into 50/125 fiber                        | 50      | -       | μW    |
| Optical Power Over Temp.    | dPo/dT | Tc = -40°C to +80°C                               | -       | ± 6     | dB    |
| Central Wavelength          | λ      |   | 1285    | 1345    | nm    |
| Spectral Width              | Δλ     | Tc = -40°C to +80°C                               | -       | 110     | nm    |
| Wavelength Temp Coefficient | dλ/dT  | Tc = -40°C to +80°C                               | -       | 0.8     | nm/°C |
| Rise/Fall Times             | tr/τf  | 10% to 90% points                                 | -       | 3       | nS    |
| Forward Voltage             | Vf     |   | -       | 1.7     | V     |
| Reverse Leakage             | Vr     | Bias = -2 V                                       | -       | 200     | μA    |

## Electrical Pin Out



## Mechanical Outline Options

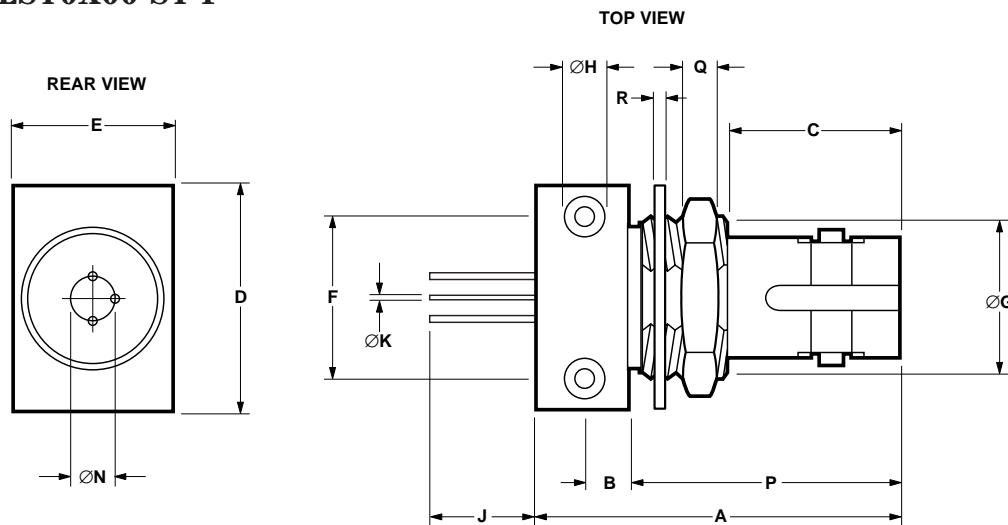
### LST0X00-FC-A



| DIM. | MIN.      | MAX.  | DIM. | MIN.      | MAX. |
|------|-----------|-------|------|-----------|------|
| A    | —         | 19.50 | ØJ   | 2.08      | 2.32 |
| B    | —         | 9.50  | ØK   | —         | 4.20 |
| C    | —         | 13.0  | L    | —         | 1.70 |
| ØD   | —         | 9.0   | M    | —         | 2.20 |
| E    | 12.0      | —     | N    | —         | 4.80 |
| ØF   | 0.41      | 0.47  | P    | —         | 8.20 |
| ØG   | M8 x 0.75 |       | ØQ   | 2.54 NOM. |      |
| H    | 13.35     | 13.55 |      |           |      |

ALL DIMENSIONS IN MILLIMETERS

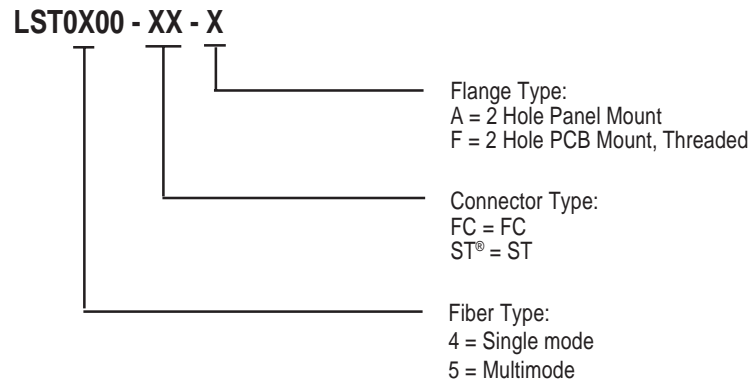
### LST0X00-ST-F



| DIM. | MIN.           | MAX. | DIM. | MIN.        | MAX. |
|------|----------------|------|------|-------------|------|
| A    | —              | 21.0 | ØH   | 2-56 UNC-2B |      |
| B    | 1.8            | 2.2  | J    | 12.0        | —    |
| C    | 9.6            | 9.8  | ØK   | 0.41        | 0.47 |
| D    | —              | 12.9 | ØN   | 2.54 NOM.   |      |
| E    | 9.3            | 9.7  | P    | 14.9        | 15.3 |
| F    | 9.43           | 9.63 | Q    | 2.54 NOM.   |      |
| ØG   | 3/8-32 UNEF-2A |      | R    | 0.50 NOM.   |      |

ALL DIMENSIONS IN MILLIMETERS

## Ordering Information



### Preferred Options:

LST0400-FC-A  
LST0400-ST-F  
LST0500-FC-A  
LST0500-ST-F

Additional options are available to meet your specific needs.  
Please contact your local representative for details.