

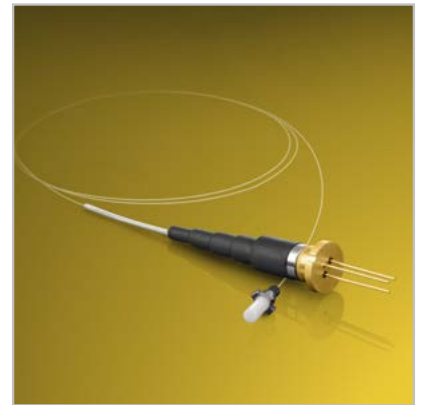
## Fiber Pigtailed Pulsed Laser Diodes

### Features

- Single and stacked devices up to 145 Watts ex fiber
- 905 nm and 1550 nm
- Coupling efficiency up to 85%
- Excellent temperature stability
- Custom versions available

### Applications

- Range finding
- Surveying equipment
- Laser radar
- Medical
- DTS



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## 905 xx FP-Series

### Generic Characteristics at $t_{RT}= 21^{\circ}\text{C}$

	Min	Typ	Max	Units
Wavelength of peak radiant intensity $\lambda_m$	895	905	915	nm
Spectral bandwidth $\Delta\lambda$ at 50% intensity points		8		nm
Wavelength temperature coefficient		0.27		nm/ $^{\circ}\text{C}$

\* 8 nm for multi-junction devices

### Multi Junction Chips and Stacked Arrays

Stacked chip characteristics at  $t_{RT}= 21^{\circ}\text{C}$ ,  $t_W= 150\text{ ns}$ ,  $P_{rr}= 6.66\text{ kHz}$

Parameter	905D1S3J03FP-10/22-F-0-01	905D1S3J09FP-40/22-F-0-01	905D2S3J09FP-40/22-F-0-01	905D4S3J08FP-40/22-F-0-01
Integrated pulsed laser diode	905D1S3J03R	905D1S3J09R	905D2S3J09R	905D4S3J08R
$P_o$ ex fiber at $i_{FM}$ (min.)	12 W	35 W	65 W	145 W
Fiber core / cladding diameter	105 $\mu\text{m}$ /125 $\mu\text{m}$	400 $\mu\text{m}$ /440 $\mu\text{m}$	400 $\mu\text{m}$ /440 $\mu\text{m}$	400 $\mu\text{m}$ /440 $\mu\text{m}$
Fiber NA	0.22	0.22	0.22	0.22
Max peak forward current $i_{FM}$	11 A	35 A	35 A	30 A
$I_{th}$ typ	300 mA	800 mA	800 mA	750 mA

## 155 xx FP-Series

### Generic Characteristics at $t_{RT}= 21^{\circ}\text{C}$

	Min	Typ	Max	Units
Wavelength of peak radiant intensity $\lambda_m$	1520	1550	1580	nm
Spectral bandwidth $\Delta\lambda$ at 50% intensity points		30		nm
Wavelength temperature coefficient		0.6		nm/ $^{\circ}\text{C}$

### Single Chips

Single chip characteristics at  $t_{RT}= 21^{\circ}\text{C}$ ,  $T_w= 150\text{ ns}$ ,  $P_{rr}= 3.33\text{ kHz}$

Parameter	155G1S02FP- 62/27-F-0-01	HI155G1S04FP- 10/22-L-0-01	HI155G1S04FP- 10/22-F-0-01
Integrated pulsed laser diode	155G1S02R	HI155G1S04R	HI155G1S04R
$P_o$ ex fiber at $i_{FM}$ (min) *	4 W	7 W	5 W
Fiber core / cladding diameter	62.5 $\mu\text{m}$ / 125 $\mu\text{m}$	105 $\mu\text{m}$ / 125 $\mu\text{m}$	105 $\mu\text{m}$ / 125 $\mu\text{m}$
Fiber NA	0.27	0.22	0.22
Max. peak forward current $i_{FM}$	20 A	30 A	30 A
$I_{th}$ typ	300 mA	600 mA	600 mA

\*  $I_{FM}$  is the maximum peak current under any drive condition and is applicable to devices operated for short and intermittent duration such as in hand held range finders.

For applications that demand continuous use at maximum duty factor, we recommended  $I_{FM}$  at 50% to ensure longevity. High temperature operation will reduce peak power and MTTF so for optimal performance under high stress conditions it is important to provide an adequate heat sink.

### Absolute Maximum Ratings

Maximum ratings	Limiting values
Peak reverse voltage	6 V
Pulse duration	
Single element	150 ns
Stacks	150 ns
Duty factor	0.1%
Temperature	
Storage	-55 °C to +85 °C
Operating	-40 °C to +85 °C
Lead soldering	
5 seconds max at	200 °C

**Note:** Further specifications are available on the individual datasheets of the integrated pulsed laser diode.

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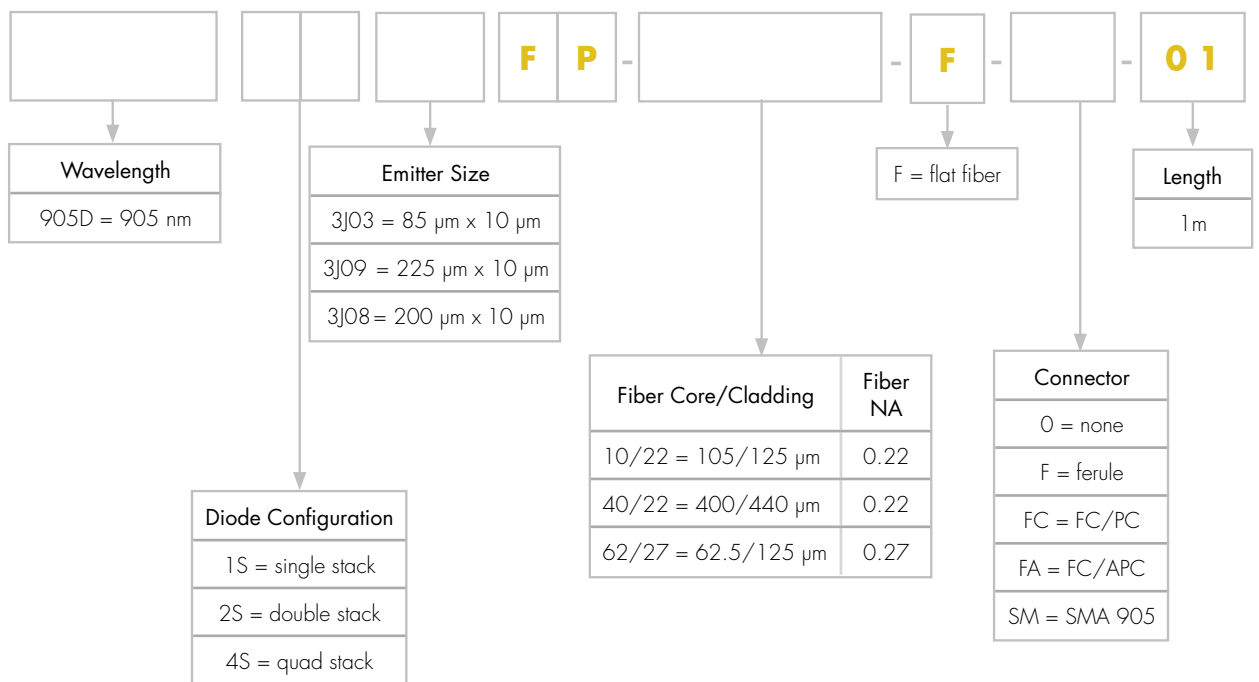
## Product Number Designation

905D1S3J03FP-10/22-F-0-01

905D1S3J09FP-40/22-F-0-01

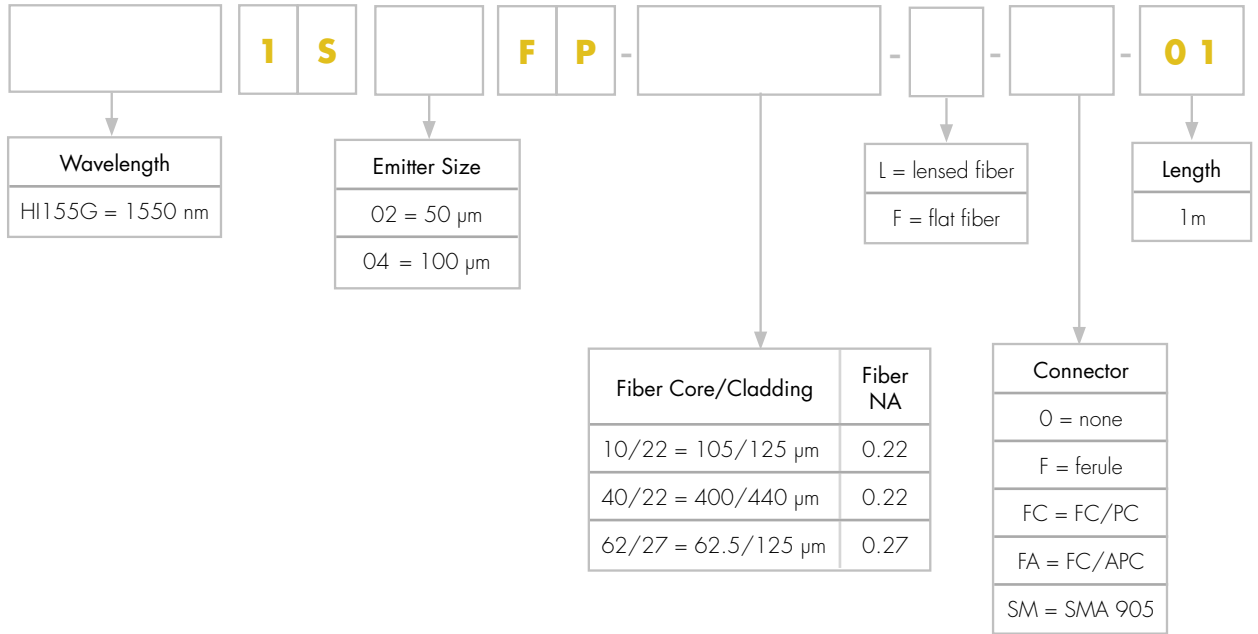
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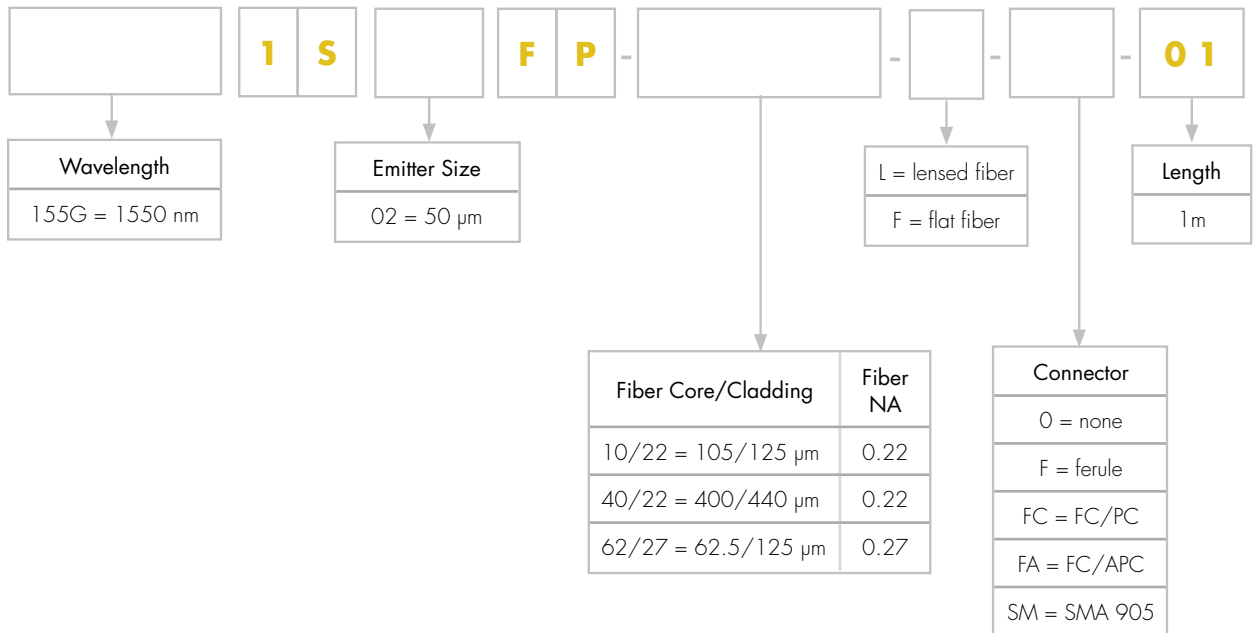


HI155G1S04FP-10/22-L-0-01

HI155G1S04FP-10/22-F-0-01



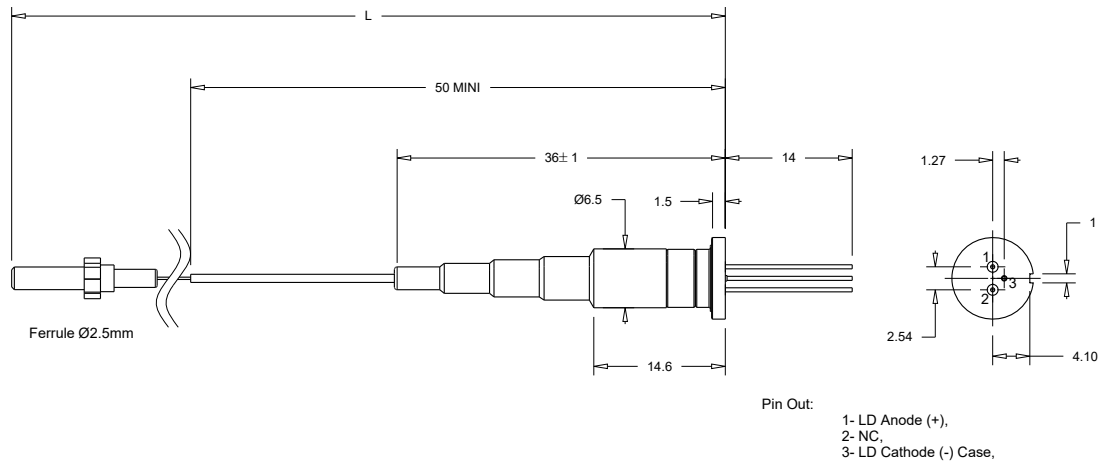
155G1S02FP-62/27-F-0-01



**Note:** other fiber types, lengths, and connectors are available upon request.

Please contact us for further details.

### Package FP Fiber Pigtailed



### Product Changes

LASER COMPONENTS reserves the right to make changes to the product(s) or information contained herein without notice. No liability is assumed as a result of their use or application.

### Ordering Information

Products can be ordered directly from LASER COMPONENTS or its representatives. For a complete listing of representatives, visit our website at [www.lasercomponents.com](http://www.lasercomponents.com). Custom designed products are available on request.

### Laser Safety

#### Personal Hazard:

Depending on the mode of operation, these devices emit highly concentrated non visible infrared light which can be hazardous to the human eye. Products which incorporate these devices have to follow the safety precautions given in IEC 60825-1 "Safety of laser products".

#### Handling Precautions:

Products are subject to the risks normally associated with sensitive electronic devices including static discharge, transients, and overload.

