

SINGLE CHIPS

Single chip characteristics at $t_{RT} = 21^{\circ}C$, $t_w = 150$ ns, Duty Factor (DF) = 0.1 %

Parameter	155G1S2J02X
P_o at i_f (typ.)	5 W
Emitting area	50 x 7 μm
Peak forward current i_f	10 A
i_{FM} (max)*	20 A
Average power output (max)*	5 mW
I_{th} (typical)	0.4 A
V_f at i_f	10 V

***Notes on reliability and overdrive**

These products have proven MTTF beyond 1000 hours when operated continuously at i_f and 0.1% duty cycle. Although the devices may be substantially overdriven it is important to respect maximum drive currents, i_{FM} and maximum average power output. Longevity under all overdrive conditions has not been verified, but should be acceptable for applications such as rangefinding where the on-time of the devices is limited. The devices must be adequately heat sunk, particularly in applications where the units are operated continuously. High temperature operation will reduce performance and MTTF.

ABSOLUTE MAXIMUM RATINGS

Maximum ratings	Limiting values
Peak reverse voltage	2 V
Pulse duration	
Single element	200 ns
Duty factor	0.1 %
Temperature	
Storage	- 55 $^{\circ}C$ to + 100 $^{\circ}C$
Operating	- 45 $^{\circ}C$ to + 85 $^{\circ}C$
Lead soldering 5 seconds max at	200 $^{\circ}C$



Figure 1:
Wavelength vs. temperature

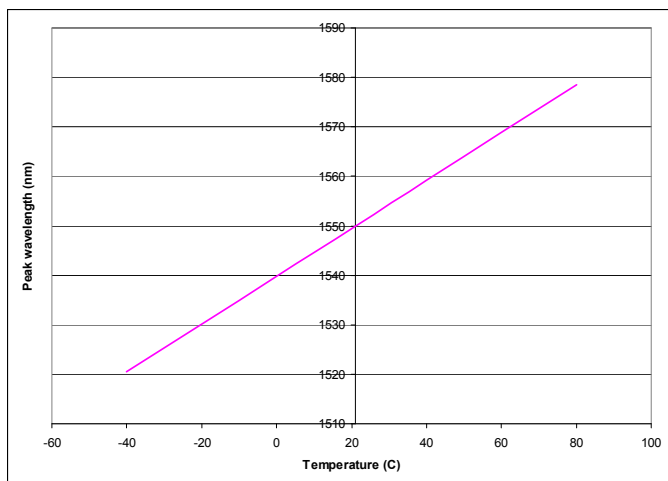


Figure 2:
Optical Output Power vs. Forward Current

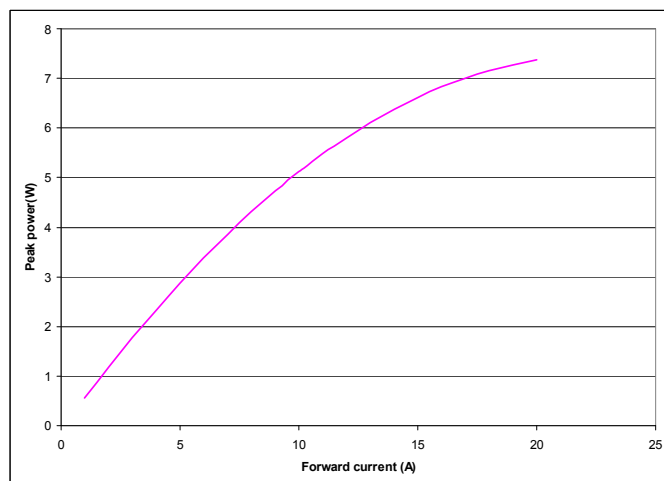


Figure 3:
Static Forward Voltage vs. Peak Current

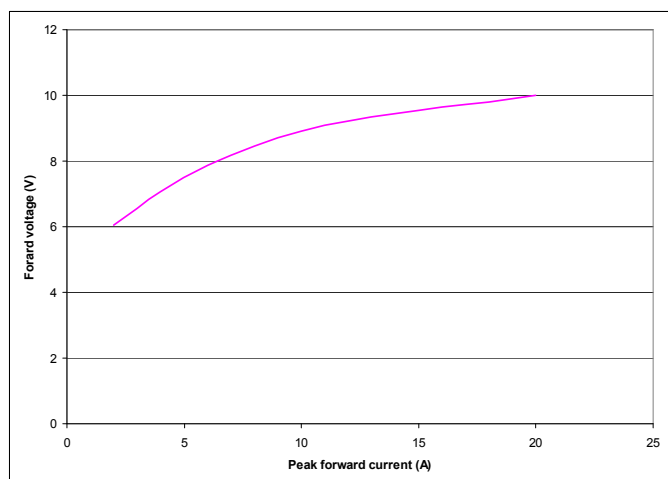


Figure 4:
Relative Optical Power vs. Temperature

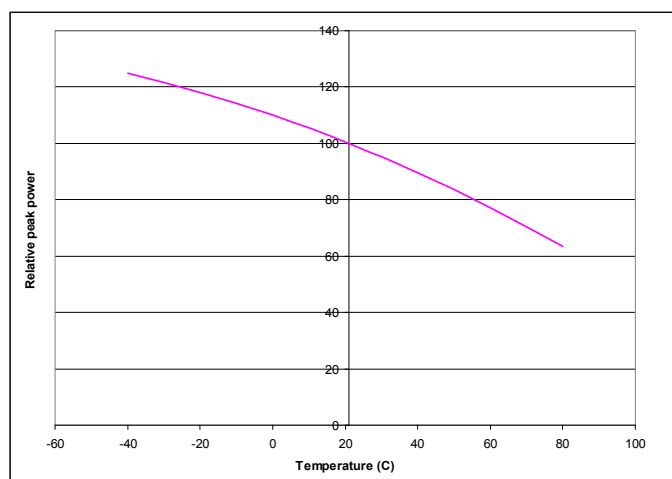


Figure 5:
Far field emission parallel and perpendicular to junction plane

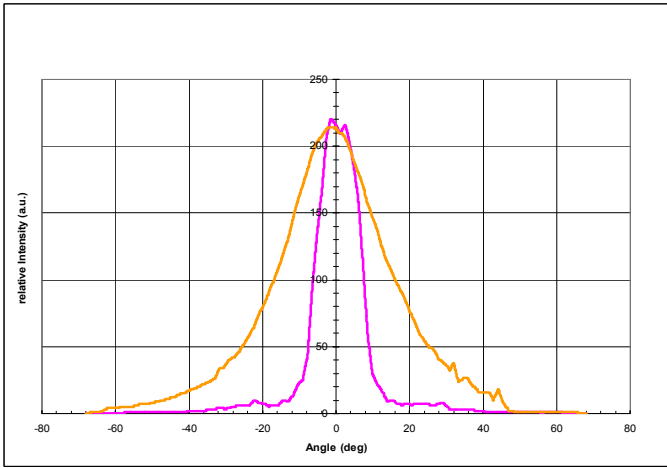
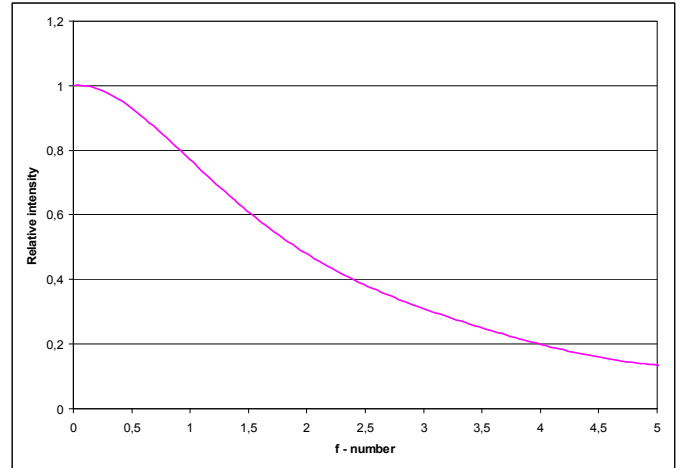
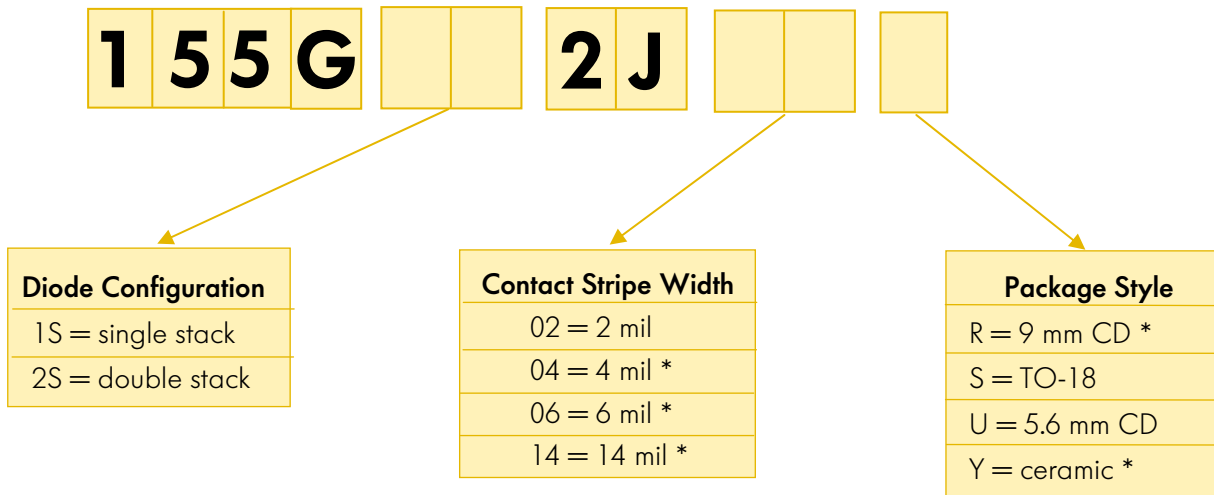


Figure 6:
Relative intensity vs relative aperture size (f/#)



PRODUCT NUMBER DESIGNATION

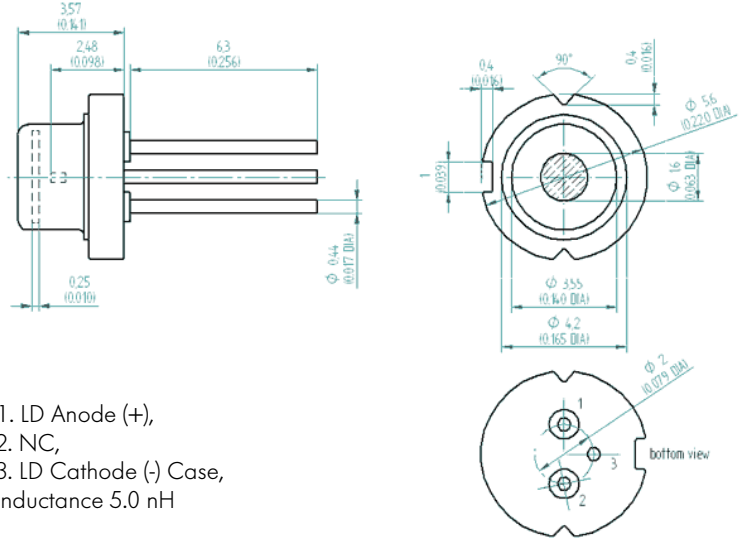
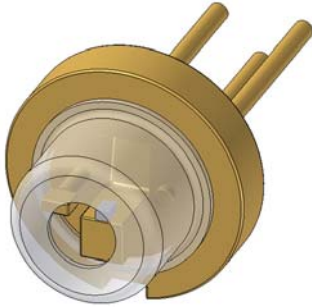


* available on request.



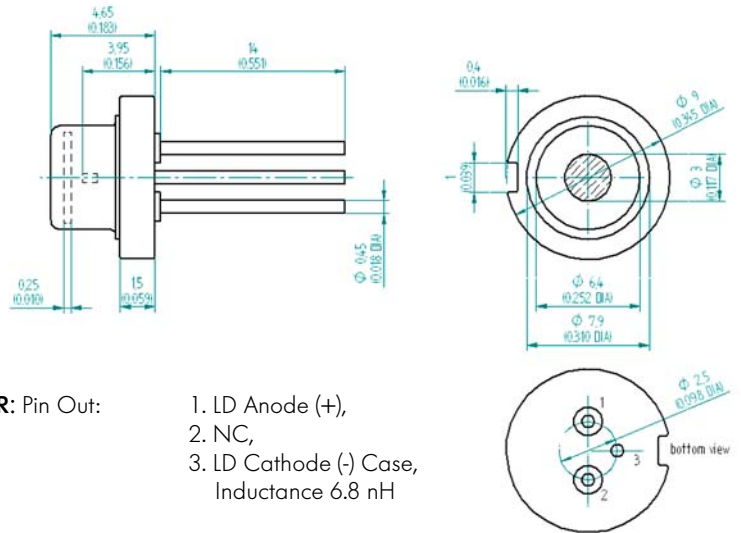
PACKAGE DRAWINGS

Package U 5.6 mm CD



Package U: Pin Out: 1. LD Anode (+),
2. NC,
3. LD Cathode (-) Case,
Inductance 5.0 nH

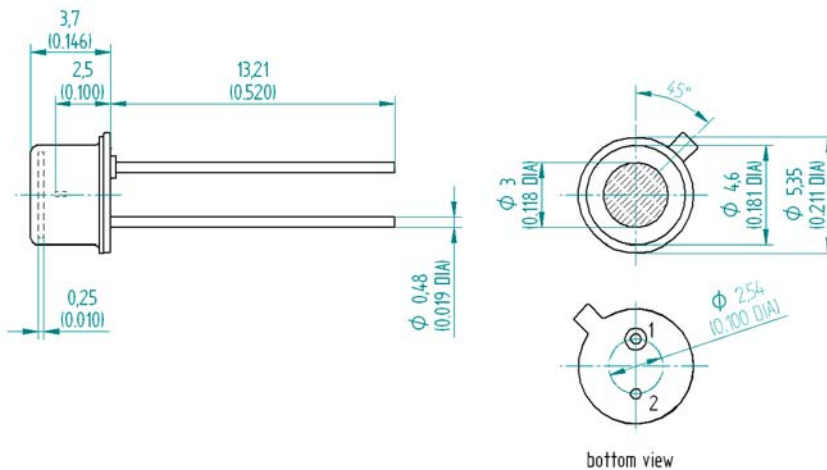
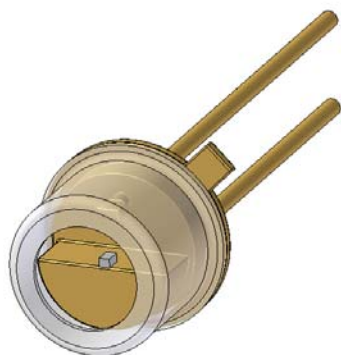
Package R 9 mm CD



Package R: Pin Out: 1. LD Anode (+),
2. NC,
3. LD Cathode (-) Case,
Inductance 6.8 nH

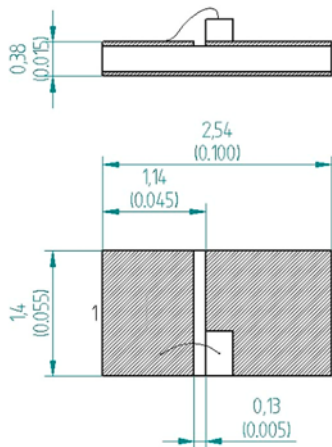
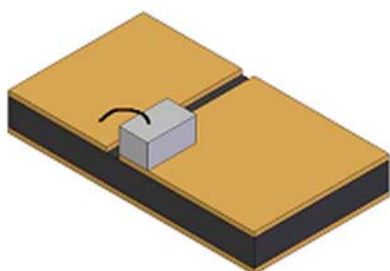


Package S TO-18



Package S: Pin Out: 1. LD Anode (+), 2. LD Cathode (-) Case, Inductance 5.2 nH

Package Y ceramic carrier



Package Y: Pin Out: 1. LD Anode (+), 2. LD Cathode (-), Inductance 1.6 nH



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

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.

