# DF-G2 High Speed Expert™ Dual Display Fiber Amplifier
## February 2014
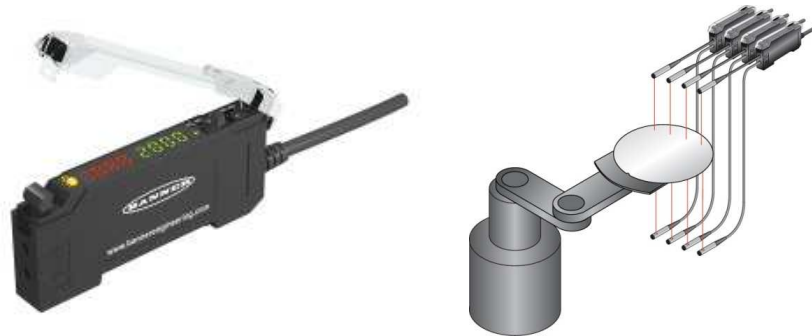
| Models | Mode | Range | Output | Connector | Price |
|---|---|---|---|---|---|
| DF-G2-NS-2M | Visible Red LED with Ø 2.2 mm Plastic Fiber OR Ø 2.2 mm Glass Fiber | Range varies by response speed used and with fiber optics used. Reference catalog, datasheet, or website for range information. | NPN | 2m PVC Cable | $ 149 |
| DF-G2-NS-9M | | | | 9m PVC Cable | $ 155 |
| DF-G2-NS-Q3 | | | | 4-pin 150 mm (6 in) M8 pigtail QD with PVC cable | $ 161 |
| DF-G2-NS-Q5 | | | | 4-pin 150 mm (6 in) M12 pigtail QD with PVC cable | $ 161 |
| DF-G2-NS-Q7 | | | | 4-pin Snap M8 QD Connector | $ 149 |
| DF-G2-PS-2M | | | PNP | 2m PVC Cable | $ 149 |
| DF-G2-PS-9M | | | | 9m PVC Cable | $ 155 |
| DF-G2-PS-Q3 | | | | 4-pin 150 mm (6 in) M8 pigtail QD with PVC cable | $ 161 |
| DF-G2-PS-Q5 | | | | 4-pin 150 mm (6 in) M12 pigtail QD with PVC cable | $ 161 |
| DF-G2-PS-Q7 | | | | 4-pin Snap M8 QD Connector | $ 149 |

## Development Strategy

The DF-G2 series is the high speed version of the DF-G fiber optic amplifier family.  The DF-G2 was designed to achieve the world's fastest response speed and precise repeatability for fiber optic sensing applications.  A much brighter LED and a more effectively coupled optical system was designed to extend sensing range and improve speed.  The result is a sensor that can achieve 10 microsecond response time with 5 microsecond repeatability and detection ranges exceeding the competition.

Development of additional DF-G2 fiber amplifiers with specialized firmware for small object counting and models with white, green, and blue LED colors for registration mark applications is underway.

## Features/Benefits

• Response speeds of:
- 10 µs (Super High Speed)
- 15 µs (High Speed)
- 50 µs (Fast)
- 250 µs (Standard)
- 500 µs (Medium Range)
- 1000 µs (Long Range)

• User has full control over all parameters:
- Switch point threshold
- Light Operate or Dark Operate
- Output timing functions (One-Shot, On/Off Delay)
- Gain level
- Response speed

• New highly visible red LED sensing beam for easy alignment to the target
• ECO (economy) display mode reduces amplifier power consumption by 25%
• Easy to read dual digital displays show both signal level and threshold simultaneously
• Programming via displays and switches/buttons or remote input teach wire
• *Expert* TEACH and SET methods ensure optimal gain and threshold for all applications, especially low contrast applications
• Thermally stable electronics minimize warm-up drift and reduce the effect of side-by-side mounting of multiple fiber amplifiers
• Cross talk avoidance algorithm allows two sensors to operate in close proximity for many applications
• Sleek 10 mm wide housing mounts to standard 35 mm DIN rail

## Applications

• Semiconductor – wafer positioning/mapping
• Semiconductor – wire bond detection
• Packaging and labeling - web splice detection
• Packaging and labeling – registration mark sensing
• Packaging and labeling – label sensing
• Packaging – product leading edge
• Low contrast & High Speed - parts detection
• Low contrast & High Speed - thread break

## Links and Sales Tools

**Literature**
• DF-G2 Installation guide p/n 177900
• DF-G2 Manual p/n 177899
• Fiber Optic Amplifier Selection Guide

**PowerPoint**
• DF-G2 Overview – Customer PowerPoint
• DF-G2 Overview – Channel PowerPoint

## Competition

• Panasonic FX-502 Series
• Keyence NEO series FS-N11P
• Omron E3X-DA41-S
• Sick WLL180T