

# D / DA photodetectors

## Laser Pulse Measurement & Fast Photodetectors

Convert a pulsed optical signal into an electrical waveform for an oscilloscope. Choose a biased D-series detector for fast pulse monitoring or a DA-series amplified detector for fixed-gain signal acquisition, with free-space and fibre-adaptor options.

### Measurement method

Match the detector spectral response, rise time, bandwidth and sensitive area to the laser. Attenuate the incident light as required, connect the detector output to a suitable oscilloscope and measure waveform, pulse width, repetition rate, period and rise/fall time.

### Features

- Removable optical attenuation
- D-series 12 V bias battery
- DA-series fixed-gain amplification and  $\pm 12$  V linear supply
- 50  $\Omega$  load recommended for high-speed D-series detection
- BNC cable and SM1-SMA / SM1-FC adapters available

### Applications

- Pulse-width and repetition-rate measurements
- Pulse-shape and rise/fall-time monitoring
- Optical timing and synchronisation

### Detector selection

| Model    | Wavelength range | Rise time | Bandwidth |
|----------|------------------|-----------|-----------|
| D200-SI  | 200-1100 nm      | 1 ns      | 350 MHz   |
| D320-SI  | 320-1100 nm      | 35 ns     | 10 MHz    |
| D800-IN  | 800-1700 nm      | 350 ps    | 1 GHz     |
| DA320-SI | 320-1100 nm      | 35 ns     | DC-11 MHz |
| DA350-SI | 350-1100 nm      | 10 ns     | DC-12 MHz |

### Supply and accessories

| Parameter   | Specification                                                                      |
|-------------|------------------------------------------------------------------------------------|
| DA supply   | Regulated $\pm 12$ V DC; ground, +12 V and -12 V connections; LED switch indicator |
| DA load     | Built-in 50 $\Omega$ load impedance                                                |
| D bias      | Built-in 12 V bias battery                                                         |
| Accessories | 50 $\Omega$ load, BNC cable, SM1-SMA and SM1-FC fibre adapters                     |

### Conditions and configuration notes

Measured rise time and pulse width depend on the complete detector, cable, termination and oscilloscope chain.

The DA320-SI document contains inconsistent NEP/gain units. Its individual datasheet preserves the published fields and requests confirmation rather than assigning an unsupported NEP.

### Specify your measurement

- Laser wavelength, pulse duration, energy and repetition rate
- Beam size, incident power and attenuation
- Oscilloscope bandwidth, termination and input range

*Prepared by Precisometer. Technical review: 24 October 2026. Confirm the supplied configuration, measurement conditions, accessories and warranty with the quotation.*

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