

Redefining Measurement

ID300 Short-Pulse Laser Source

Sub-Nanosecond Pulsed Laser Source

ID Quantique's ID300 Short-Pulse Laser Source has been designed to meet the specific requirements of researchers who need to generate short laser pulses at a wavelength of 1550 nm.

The laser source, based on a distributed-feedback (DFB) laser diode, is triggered externally via a trigger input to produce sub-nanosecond laser pulses with a repetition rate ranging from 0 to 500 MHz.

The ID300 laser source is ideally suited to work in combination with IDQ's Single-Photon Detection and Counting Modules (ID210, ID220, ID230 or ID280 series). The laser source can be directly triggered by the ID210's internal clock. Used in combination with a variable optical attenuator, this short-pulse laser source makes an ideal cost-effective single-photon source.



Key Features

- ▶ Sub-nanosecond laser pulses, pulse width 300 ps
- ▶ Repetition rate from 0 to 500 MHz
- ▶ Wavelength: 1550 nm
- ▶ Distributed-feedback (DFB)
- ▶ External trigger
- ▶ Compact and reliable stand-alone unit
- ▶ FC/PC connector

Applications

- ▶ Quantum optics
- ▶ Fibre optics characterization
- ▶ Spectroscopy
- ▶ Optical measurements
- ▶ Single-photon detector characterization
- ▶ Nanophotonics
- ▶ Optical Time Domain Reflectometer (OTDR)

SHORT-PULSE LASER SOURCE

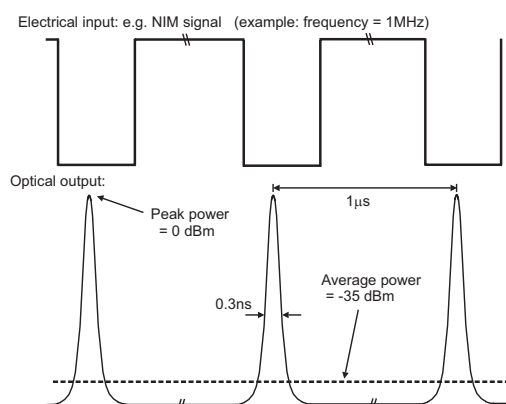
Specifications (T=25 °C)

| Parameter | Min | Typical | Max | Units |
|--|--------------------------------------|---------|------|-------|
| Wavelength | 1520 | 1550 | 1580 | nm |
| Spectral width (FWHM) - DFB laser type | | 0.6 | 1.5 | nm |
| Frequency range | 0 | | 500 | MHz |
| Pulse duration | | 0.3* | 0.5 | ns |
| Peak power | 0.7 | 1 | | mW |
| Output power at 1 MHz | -36 | -35 | -34 | dBm |
| Trigger input** | NIM, ECL, PECL, LVPECL, TTL, TTL 50Ω | | | |

* can be increased up to 2ns upon request

** choose one trigger input from this list. See ordering information below.

Operating Principle



General Information

| | |
|-----------------------|----------------------------|
| Operating Temperature | +10°C to +30°C |
| Dimensions LxWxH | 185 mm x 172 mm x 55 mm |
| Weight | 915 g |
| Optical Connector | FC/PC |
| Electronic Connector | BNC |
| Fibre Type | SMF |
| Power Supply | 100 - 240 VAC (autoselect) |

Warning

CLASS 1 LASER PRODUCT

CLASSIFIED PER IEC 60825-1, Ed 1.2, 2001-08

Ordering Information and Sales Contact

Part number: ID300-1550-DFB-ZZZ

ZZZ: Select trigger input signal specifications. Choose between NIM, ECL, PECL, TTL, TTL 50 Ω, LVPECL.