



Introduction of QLD106G and QBB1007 for 20-ps Gain-switching Operation

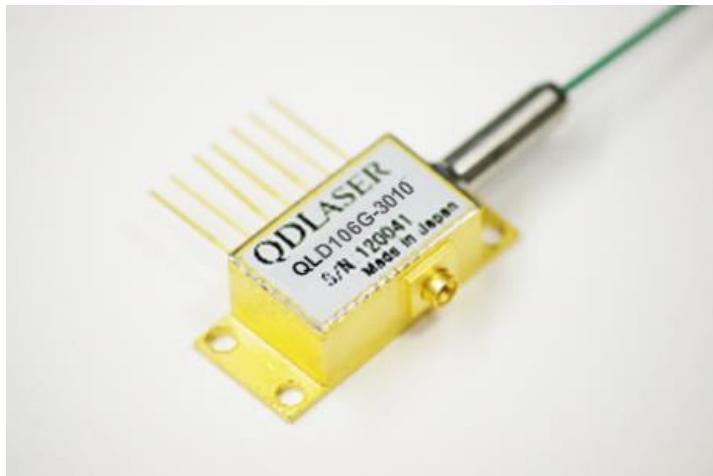
January, 2016
QD laser, Inc.

QLD106G-3010

1030-nm DFB LD BFY module

QLD106G-6410

1064-nm DFB LD BFY module



QBB1007

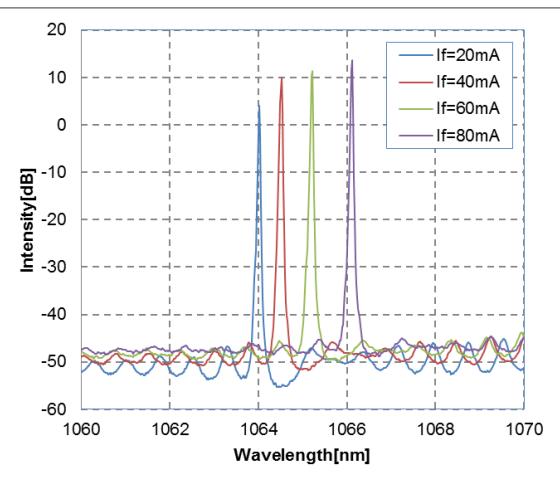
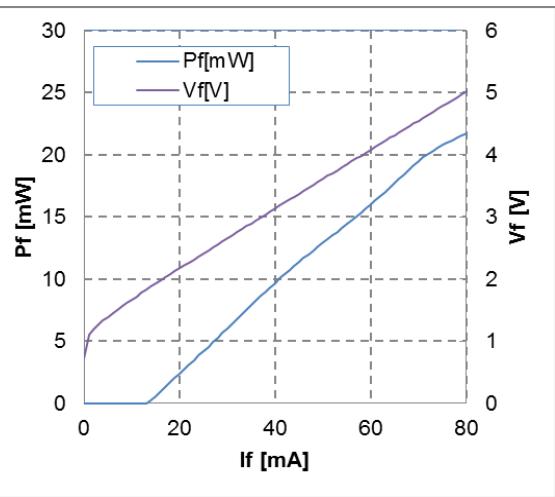
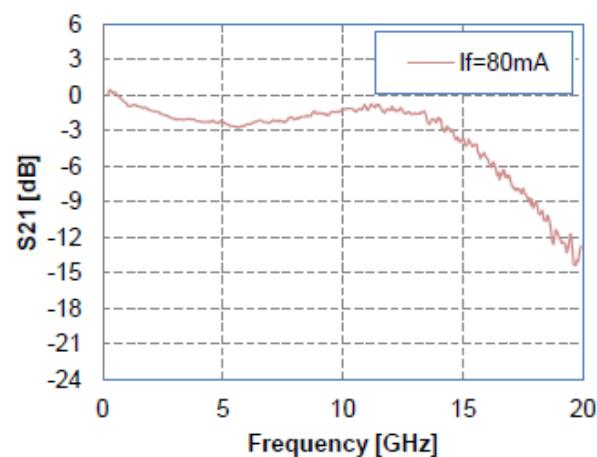
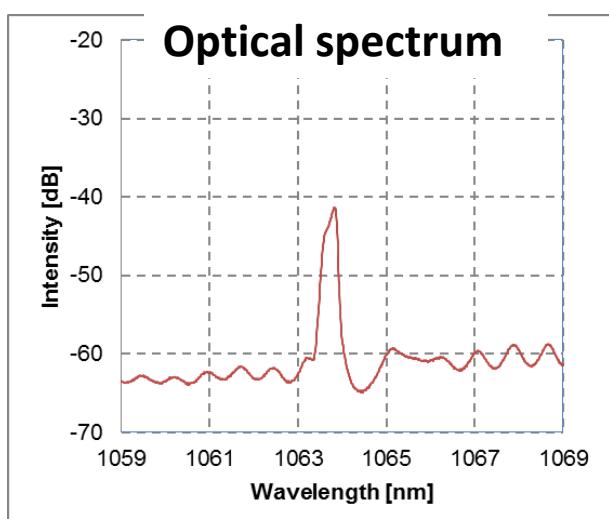
Integrated picosecond electrical pulsed generator & LD controller



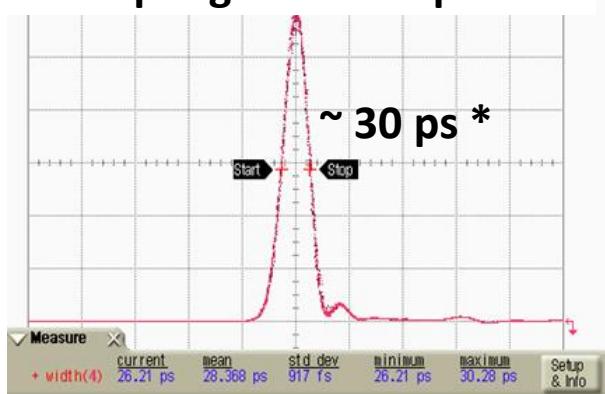
- ✓ Short cavity DFB LD for 20-ps gain-switching operation
- ✓ 7-pin BFY package with SMPM connector
- ✓ 50-Ω impedance matching resistor

Electrical pulse specifications

- ✓ Amplitude: 5 Vpp (fixed)
- ✓ Pulse width: 70 ps (fixed)
- ✓ Repetition rate: 12 kHz – 250 MHz

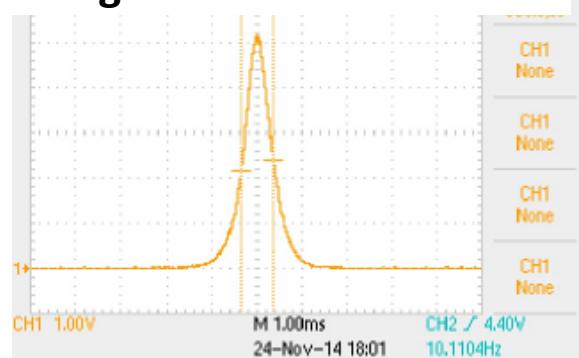
CW characteristicsFrequency responseGain-switching operation by QBB1007 (repetition rate = 1 MHz)

Optical pulse measured by a sampling oscilloscope



* Limited by the detector bandwidth (20 GHz)

Optical pulse measured by using an auto correlator



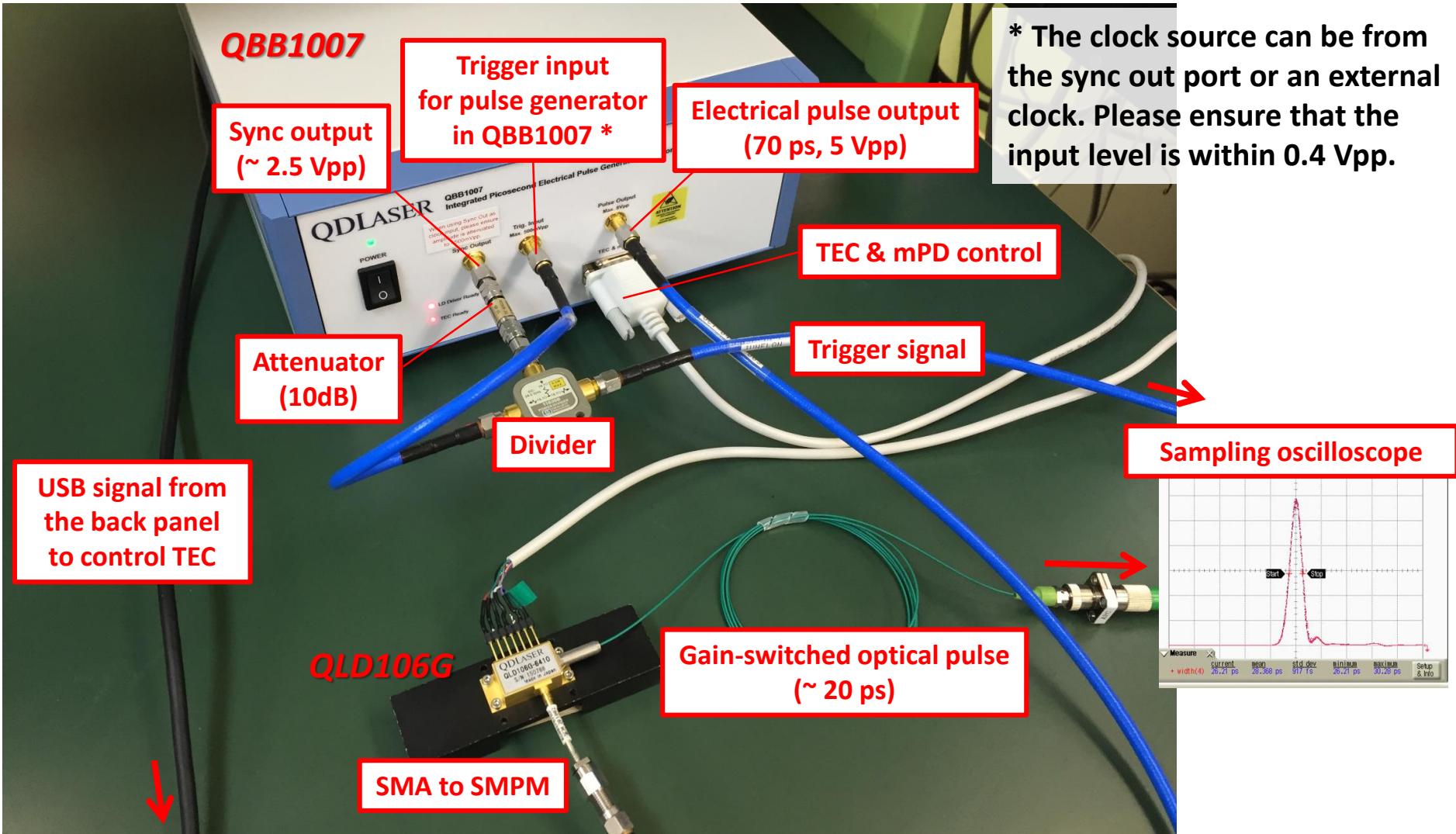
$$\text{Tac} = 0.66 \times 0.31 = 20.5 \text{ ps}$$

$$\text{Tsech} = 13.3 \text{ ps}$$

Wiring example for QLD106G and QBB1007

QDLASER

Confidential



PC

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