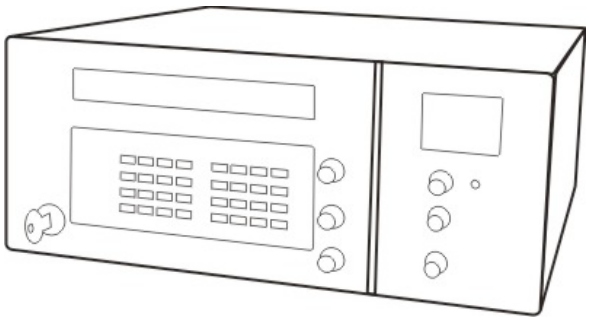
*Electro Optic Benchtop Pulse Generator*

Performance ● Versatility ● Affordability

- ✓ Adjustable rates up to 100 MHz
- ✓ 5V to 800V amplitudes
- ✓ 650, 850, 904, 1064, 1300 and 1550 nm wavelengths
- ✓ 1 ns resolution delay and width control

# BNC model 6040

**Listed below are the timing and output characteristics of the 6040 mainframe. However, modules determine specific performance limits and characteristics such as maximum pulse width and maximum rep rate.**

**SPECIFICATIONS:**

| | |
|---|---|
| **Internal Trigger** | 0.01Hz to 100 MHz, Accuracy: 0.01% of setting |
| **Pulse Width** | 3 ns to 640 S, resolution of 1 ns or 5 digits, accuracy 0.2%, jitter 25 ps or 0.005% |
| **Delay** | 0 ns to 640 S, resolution of 1 ns or 5 digits, accuracy 0.2%, jitter 25 ps or 0.005% |
| **Trig Out** | A 3 ns wide, 2V high T0 pulse into 50 ohms |
| **Pulse Out** | A positive 4V pulse into 50 ohms. 1 ns risetime |
| **ECL Out** | An ECL level output into 50 ohms. 700 ps risetime |
| **External Trigger** | 0 to 100 MHz, slope select and threshold adjust, 50 ohm input impedance |
| **Single Cycle** | A push button initiates a single pulse cycle |
| **Double Pulse** | A pair of identical width pulses separated by the delay for each event |
| **Impulse** | A sub-ns impulse is provided for each event. (optical only) |
| **External Drive** | An incoming waveform drives a module's output between two selected levels. |
| **External Modulation** | Analog or digital signals modulate the output of an optical module with high bandwidths. (optical only) |
| **CW** | Constant light level outputs. (optical only) |

The Model 6040 pulse generator provides superior performance characteristics. For example, the timing accuracies of 0.01% for frequency and 0.2% for delay and width are unusual for a pulse generator. The triggering jitter of 25 ps provides synchronizing capabilities usually associated with only the very best digital delay systems. Plug-in modules let you select the output configuration you currently need. Even the mainframe 6040 without any module provides capable positive and negative outputs.

Capabilities of the mainframe with its modules include: single pulse, double pulse, impulse, external drive, external modulation and CW. The modules themselves determine which of these capabilities are available. Some modules can operate to full repetition rate of the mainframe; others are limited to a smaller number.

**Electrical Modules**

These interchangeable modules provide electrical signals from 5V, 180ps risetimes to 800V, 10 ns risetimes. The higher amplitudes have slower risetimes and the slower risetimes result in reduced maximum rep rates.

**Optical Modules**

These interchangeable modules provide wavelengths of 650 nm, 650 nm, 850 nm, 904 nm, 1064 nm, 1300 nm and 1550 nm. Other wavelength options may be available so check with the factory if you have special needs. The optical modules offer rep rate, delay and width control as well as amplitude adjust – essentially providing the optical equivalent of an electrical pulse generator. For all the modules, light is conveniently provided at end of an optical fiber for easy routing on an optical bench or to a test system.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## Electrical Modules

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| ELECTRICAL MODULE | CHARACTERISTICS | AMPLITUDE INTO 50 OHMS | OFFSET | MAX RATE | RISETIME | MIN WIDTH | MAX WIDTH |
|---|---|---|---|---|---|---|---|
| **201E** | fast risetime high rep rate | 5 V | +/- 5 V | 180 ps | 100 MHz | 1 ns | 640 S |
| **202H** | high pulse power | 300 V | None | 500 KHz | 5 ns | 12 ns | .005%/us droop |
| **310H** | high pulse power | 800 V | None | 40 KHz | 15 ns | 25 ns | 1%/us droop |

## Optical Modules

These interchangeable modules provide wavelengths of 635 nm, 650 nm, 660 nm, 850 nm, 904 nm, 1064 nm, 1300 nm and 1550 nm. Other wavelength options may be available so check with the factory if you have special needs. The optical modules offer rep rate, delay and width control as well as amplitude adjust – essentially providing the optical equivalent of an electrical pulse generator. For all the modules, light is conveniently provided at end of an optical fiber for easy routing on an optical bench or to a test system.

| OPTICAL MODEULE | WAVE LENGHT | PEAK POWER | MODE | MAX RATE | MIN WIDTH | MAX WIDTH | IMPULSE | CW | EXT MOD | EXT DR |
|---|---|---|---|---|---|---|---|---|---|---|
| **65** | 650 nm 635, 660 available | 2 mW higher available | multi | 100 MHz | 3 ns | 640 S | yes | yes | yes | yes |
| **85** | 850 nm | 2 mW | multi | 100 MHz | 3 ns | 640 S | yes | yes | yes | yes |
| **90** | 904 nm | 1 mW | single | 100 MHz | 3 ns | 640 S | yes | yes | yes | yes |
| **106C** | 1064 nm | 1 mw | single | 100 MHz | 3ns | 640 S | yes | yes | yes | yes |
| **106H** | 1064 nm | 50 mW (*100mW) | multi | 2 kHz | 10 ns | 25 ns* | contact factory | yes | yes | yes |
| **130** | 1300 nm | 1 mW | single | 100 MHz | 3 ns | 640 S | yes | yes | yes | yes |
| **155** | 1550 nm | 1 mW | single | 100 MHz | 3 ns | 640 S | yes | yes | yes | yes |
| **155H** | 1550 nm | 40 mW | multi | 2 kHz | 10 | 25 ns | contact factory | pulse only | yes | yes |

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