

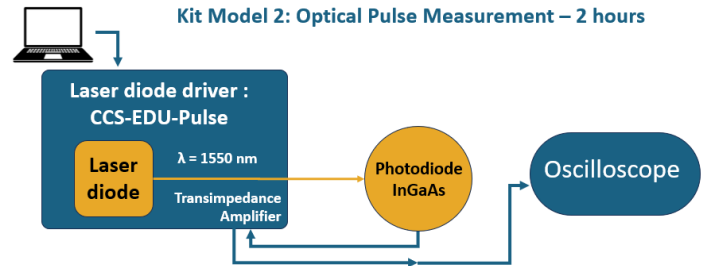
# Educational kit: Photodiode detection

Kit Model 2: Optical Pulse Measurement – 2 hours

Reference: **EDKIT-D2**

## Objectives:

- Measure a laser pulse and monitor the pulse width, repetition rate, rise and fall time.
- Handle the impedance load charge variation.
- Estimate the bandwidth limiting factors.
- Characterize the laser diode Back Facet Monitor (internal photodiode)



## What's in the box?

- 1\* Modular diode and photodiode “pulse and CW” driver with thermal regulation and transimpedance amplifier: “CCS-Educ-Pulse”
- 1\* 1550 nm fiber coupled butterfly laser diode
- 1\* fiber coupled InGaAs photodiode + mounting
- Optional Oscilloscope (200 MHz model)

<photo kit>

SPECIFICATIONS	Unit	Min	Typ	Maximum
<b>Laser diode</b>				
CW Output Power	mW			10
Pulse output power	mW			20
Center Wavelength	nm	1545	1550	1555
CW Operating Current	mA			70
Pulse Operating current	mA			150
Laser safety classification	Class 1M			
Internal BFM Photodiode Responsivity	mA/W	5		
Internal BFM Photodiode Dark Current	nA			500
Fiber type (Connector) / Buffer diameter	SMF28 (SC/APC) / 900µm			
<b>Diode driver: CCS-Educ-Pulse</b>				
Diode driver with current limitation	Yes			
CW emission / Short pulse emission	Yes/Yes			
Laser diode thermal regulation	Yes			
Photodiode transimpedance amplifier	Yes			
GUI software with USB communication	Yes (Simplified “Pulse and CW” version)			
<b>Photodiode #1: InGaAs</b>				
Sensitivity	A/W		0.93	
Dark current				
Bandwidth				

\*: See our tutorial : [fiber coupled laser diode](#)