1. Introduction

1.1 SL-Pico

SL-Pico is a pico-second supercontinuum lasers designed to meet the diverse and dynamic needs of cutting-edge research and industrial applications. This supercontinuum white light laser is highly regarded for wide wavelength range and cost-effectiveness.

SL-Pico offers a spectral range from 410 to 2400 nm, has high power, is very stable, and is capable of delivering power up to 20 W. The SL-Pico's SL series shows relatively high power in the SWIR region. The SL-Pico's SLM series is a mode-locked fiber laser with a fixed repetition rate and stable, uniform power spectrum in visible range. The SL-Pico's SLMV series has a tunable repetition rate in MHz, ensuring compatibility with a wide range of devices. Integrating a tunable bandpass filter such as FWS poly improves the laser's versatility, enabling tunable broadband laser output. This capability is important for a variety of applications, including fluorescence microscopy, TCSPC, hyperspectral imaging, machine vision, semiconductor inspection, sensor development, and more.



Wide broadband spectral range

SL-Pico Model

Model	Supercontinuum output power		Repetition Rate	Output	Spectral Range (nm)	
	Visible	Total	Repetition Rate	pulse width (ps)	spectiul Kullge (IIIII)	
SL10	100 mW	1 W	5 MHz	< 300 ps	450 - 2400 nm	
SLM10	250 mW	1 W	10 MHz	< 50 ps	410 - 2400 nm	
SLM20	500 mW	2 W	20 MHz	< 50 ps	410 - 2400 nm	
SLM40	1 W	4 W	40 MHz	< 50 ps	410 - 2400 nm	
SLM35V	1 W	3.5 W	0.01 to 40 MHz	< 50 ps	410 - 2400 nm	
SL80V	1 W	8 W	0.01 to 200 MHz	< 300 ps	430 - 2400 nm	
SLM70	2 W	7 W	80 MHz	< 50 ps	410 - 2400 nm	

* SL-Pico model name meaning

(Example: SLM35V)

→ V stands for adjustable repetition rate

→ Total output power : 35 means 3.5 W

→ Note: if it is Mode-lock version

2. System Overview

2.4 Specifications

		SL10	SLM10	SLM20	SLM40	SLM35V	SL80V	SLM70		
Output power	Visible	100 mW	250 mW	500 mW	1 W	1 W	1 W	2 W		
	Total	1 W	1 W	2 W	4 W	3.5 W	8 W	7 W		
Repetition rate (MHz)		5 MHz	10 MHz	20 MHz	40 MHz	0.01 to 40 MHz adjustable	0.01 to 200 MHz adjustable	80 MHz		
Output pulse width (ps)		< 300 ps	< 50 ps	< 50 ps	< 50 ps	< 50 ps	< 300 ps	< 50 ps		
Fundamental pulse width (ps)		~ 100 ps	~ 6 ps	~ 6 ps	~ 6 ps	~ 6 ps	~ 100 ps	~ 6 ps		
Spectral range (nm)		450-2400 nm	410-2400 nm	410-2400 nm	410-2400 nm	410-2400 nm	430-2400 nm	410-2400 nm		
Power stability ((%)	< 1 %								
Output power co	utput power control (%) 0 - 100 %									
Output type	Armored fiber with collimator									
Beam diameter a	nd quality	~ 2 mm @ 633 nm; M2 < 1.1								
Beam divergenc	e (mrad)	< 1 mrad (half angle)								
State of polariza		Unpolarized								
Length of outpu	t fiber (m)	1.3 m								
Sync(trigger) ou	tput	NIM output 0 - (-1) V, TTL output 0 - 3.3 V								
Eletric requirem	ent	AC 100 - 240 V, 50/60 Hz								
Power consump	tion	160 W								
Software		SL-Pico ver.1								
Data interface		USB 2.0								
Dimension (L x W	/ x H, mm)	345 x 358 x 153 423 mm x 437 mm x 165 mm								
Weight (kg)		15.5 20.5 kg								