Deeplight Microcomb Turn-key System

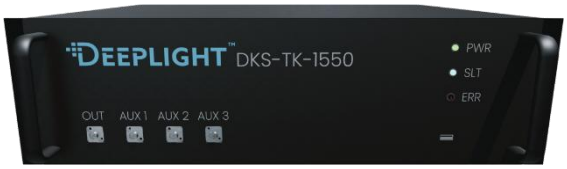
Rack-Mountable, High-Stability Frequency Comb Platform

Key Features

- Plug-and-play operation
- High comb line power > 0 dBm
- Narrow teeth linewidth < 10 kHz
- Compact 19” rack-mountable design
- Based on mature Si_3N_4 PIC technology

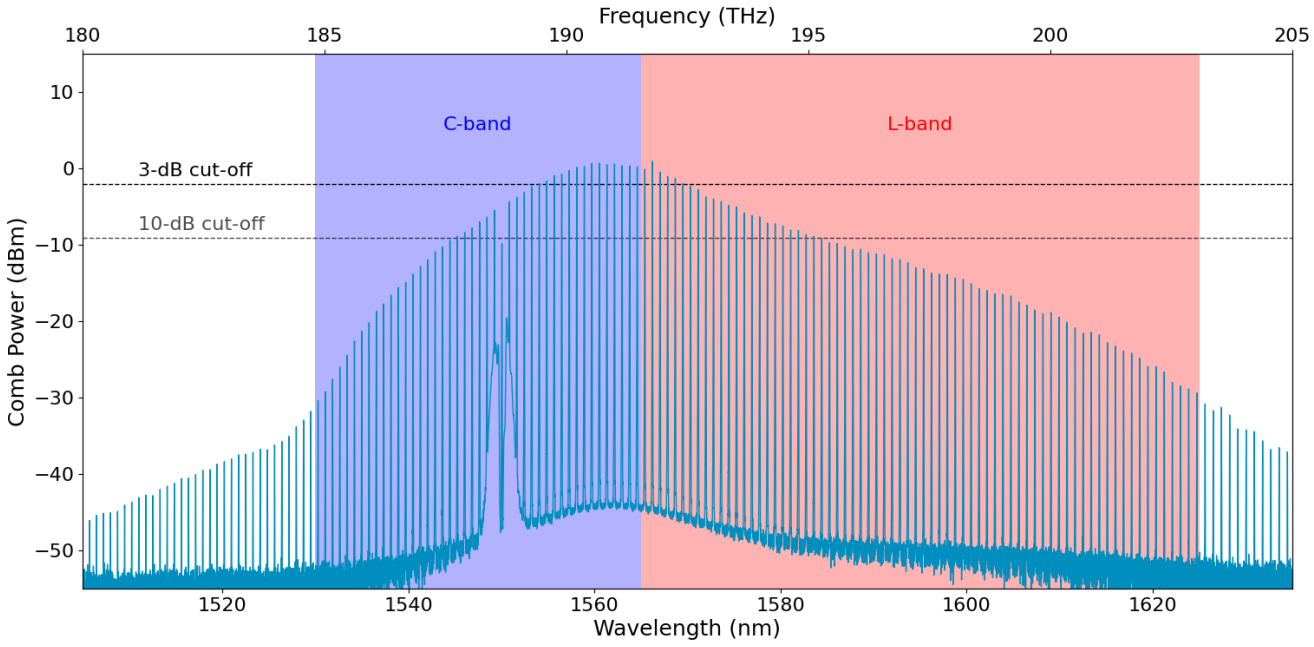
Applications

- Optical communications
- Microwave photonics
- Precision spectroscopy
- Quantum computing
- Ultra-fast ranging



Deeplight is now offering a **fully integrated** rack-mount **frequency comb** solution based on Photonic Integrated Circuit (PIC) microcomb technology. Built on Deeplight’s ultra-low-loss silicon nitride (Si_3N_4) micro-resonator platform, the system delivers **robust Dissipative Kerr Soliton (DKS) operation** with exceptional coherence, stability, and scalability.

Designed for **turnkey laboratory use** and **portable deployments,** this system provides a reliable and compact frequency comb source for precision metrology, coherent communications, spectroscopy, and emerging field applications.



Explore the future of photonics with Deeplight. Contact us!

Website: deeplight.ai

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DLT-DKS-TK-1550 - Product Spotlight

Typical Microcomb Turn-Key System Performance

Parameters	Min.	Typ.	Max.	Units	Comments
Output Interface		FC/APC			PM Panda Fiber
Free Spectral Range	10		1000	GHz	< 0.75% variation.
Center Wavelength	1549.05	1550	1550.05	nm	
3 dB Bandwidth		>10		nm	
Teeth intrinsic linewidth		10		kHz	Lorentzian; instantaneous
Power per Line	-5		5	dBm	
OSNR	20	>35		dB	Measured at 0.1 nm RBW

Turn-Key System Approach

The system is controlled via an **external computer** through standard USB connection and operates using a **predefined startup sequence** to reliably initiate and maintain **single-soliton DKS operation**.

This approach minimizes user intervention while ensuring repeatable and stable comb generation.

You can now order this product through our partner Menlo Systems!

menlosystems.com

Extending access to Dissipative Kerr Soliton Frequency Combs in North America!

MenloSystems

Strategic Partnership

DEEPLIGHT™