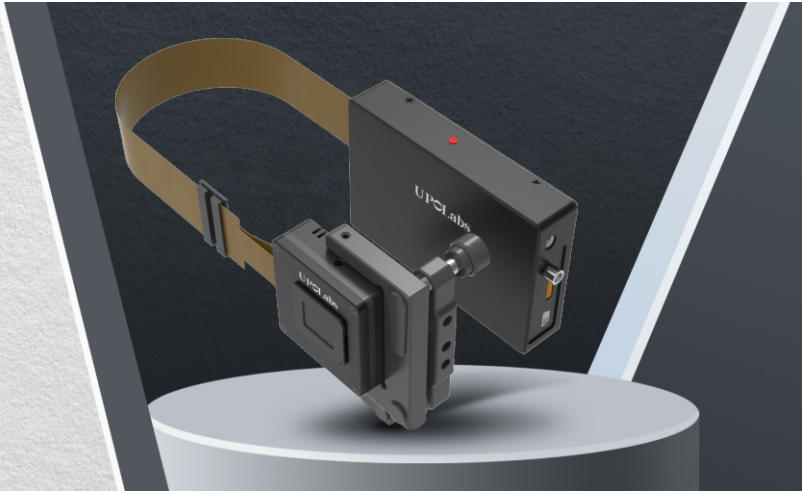


TEC Thermal Control Version Liquid Crystal Spatial Light Modulator

HDSLM80R Series



The HDSLM80R Pro Liquid Crystal Spatial Light Modulator consists of a driver, FPC flexible cable, and LCoS temperature controller. Configured with the TEC controller and LETO TEC CONTROLLER software, it is used to set the operating temperature of the LCoS optical chip based on the ambient requirement.

Product Parameter

Types	Modulation Mode	Resolution	Frame Rate	Pixel Size	Bit Depth	Fill Factor	Amplitude Contrast	Phase Retardance	Wavelength
HDSLM80R Pro	Phase-only	1920*1200	60Hz	8μm	8 / 10bit	> 95%	/	> 5.8π@532nm	420~1100nm
HDSLM80R Pro-NIR								> 2π@1064nm	1064nm
HDSLM80R Pro-TELCO								> 2π@1550nm	1550±100nm
HDSLM80R Pro-G								> 2π@532nm	532±50nm
HDSLM80RA Pro	Amplitude-only						1000 : 1	/	420~1100nm

Thermal Control System

The temperature setting of LCoS optical chip is determined by the thermal control system. The thermal control system consists of LCoS thermal controller, TEC controller and LETO TEC CONTROLLER software those work together to achieve temperature adjustment and temperature constant setting of LCoS optical chip. The thermal control system adopts modular structure allowing module replacement based on application needs.

Thermal Control System	
Temperature range	30°C~55°C
Setting accuracy of target temperature	Within ±0.1°C
Temperature range of work environment	Room temperature (typically 25°C)
Maximum incident laser power	10W/cm2 (In passive cooling mode)



LCoS Thermal Controller

At room temperature (typically 25°C), the work temperature of the LCoS optical chip backplane is allowed at any constant temperature value between 30°C and 55°C, maximum to 65°C.

Utilize passive cooling fins for heat exchange, avoiding fan vibration generated by the air cooling mode.

Provides a two-dimensional adjustment frame to fine tune pitch/deflection angle of the LCoS optical chip.



TEC Controller

It is used for connection between the LCoS thermal controller and a computer, and to send commands to control the operation of the LCoS thermal controller.

The maximum work temperature is 65°C.



LETO TEC CONTROLLER Software

Includes temperature setting of LCoS optical chip, algorithm adjustment, real-time display of temperature curve, recording temperature test records.

Read the temperature value of LCoS optical chip , set the temperature stable as demanded.

Application

Space optical communication Quantum research Cold atom control
Other scenarios requiring high phase accuracy and stability