Wintech®

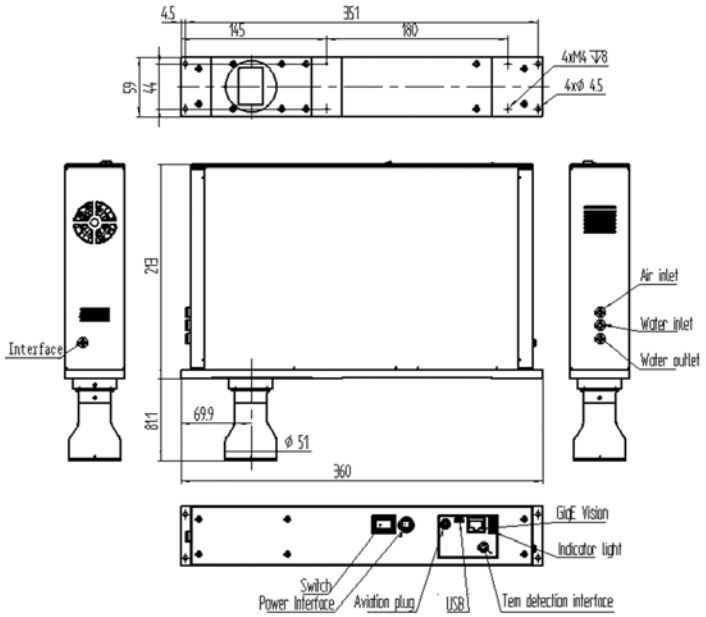
A Texas Instruments Authorized DLP®
Design House

PRO650NIR

NIR High Power Photo Head

Utilizing Texas Instrument's DLP650LNIR chipset, Wintech has developed the PRO650NIR light engine for selective layer sintering (including nylon applications), dynamic laser marking, and industrial printing applications. The PRO650LNIR provides more than 100W output utilizing a Wintech supplied 1064nm or 976nm fiber laser, though a customer supplied laser may also be used with the built in SMA905 fiber interface. This system utilizes both front side DMD (air) and liquid cooling for thermal management.

As with all Wintech PRO-series light engines, image quality is the guiding design principle. The 1280x800 WXGA DMD produces a FOV of 60x37.5mm with a 47um projected pixel size at a 113mm working distance. The PRO650NIR system delivers a power density of 4W/cm^2. The contrast ratio of the system is 800:1 and the ANSI uniformity is 95+/-5%. Distortion is an industry leading 0.1% or less utilizing a 1064nm laser with a magnification of 4.34x.



Keeping with all PRO-series modules, the PRO650NIR was designed with modularity in mind. This allows for customization to the laser source and wavelength as well as the projection lens. Mechanically, the PRO650NIR is only 59mm wide, which allows for stacking of multiple units in one machine. Interfacing and data transfer is accomplished via GigE or mini-USB (up to 30fps). Multiple hardware I/O triggers are available and system temperature is monitored via RS232. Control comes via Wintech's SDK firmware and GUI on Windows 10. The DLP650LNIR chipset is capable of up to 12,500Hz binary pattern rate. Power is 24V DC @ 7A via a locking power connector.

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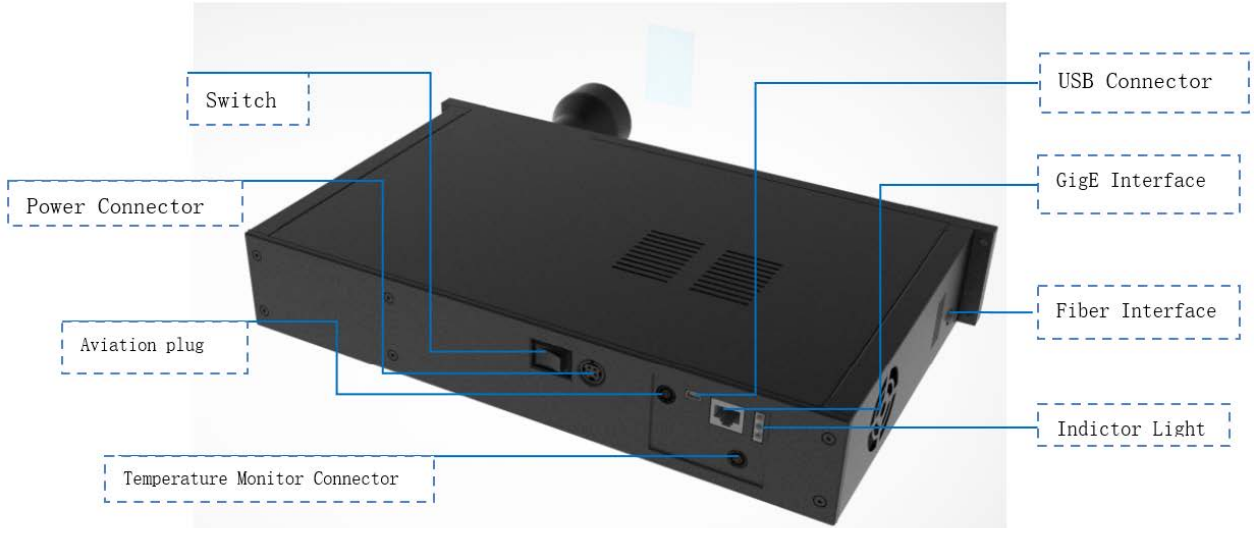
Application(s)	3D Printing, Laser Marking
DMD Model	DLP650LNIR
Laser	160W Semiconductor
System Irradiance (W)	100+/-5
Available Pixel Sizes (um)	47
Available Lens Working Distances (mm)	113
Field of View (mm)	60x37.5
Contrast Ratio	800:1
Uniformity (%)	>95+/-5
Distortion (%)	<0.1
Cooling	Liquid and Air
Size (mm)	360x213x59
Weight (kg)	< 5



Wintech Digital Systems Technology Corporation is a Texas Instrument's DLP® Authorized Design House with locations in both China and the US. We are a full-service engineering company that can design and manufacture all aspects of DLP® systems including electronics, optics, thermal management, light sources, firmware, and software.