

A TyRex Technology Family Company

CHL5500 Compact Embeddable Light Engines



KEY FEATURES & SPECIFICATIONS

- DLP[®] Digital Micromirror Device (DMD)
 DLP5500 .55" XGA DMD
- DLP[®] Support Chips
 DLPC200 Digital Controller
 - DLPA200 DMD Micromirror Driver
- Resolution
 - 1024 x 768 (XGA)
- Pattern Rates
 1-bit: 5,000Hz
 8-bit: 500Hz
 - 8-bit Grayscale Video: 60Hz
- LED Illumination Options
 Red, Green, Blue or UV (405nm)
- Fiber Illumination Options
 5mm or 7mm ferrule diameter
- 2x Output Syncs
- 1x Input Triggers
- USB 2.0 / HDMI
- Includes 12V 3A Power Supply
- 5x 1/4in- 20 tapped holes on base plate for mounting
- 7in x 3.8 in x 3in / 5lb
- Compatible with all Windows Platforms



DLi's **CEL5500 Compact Embeddable Light Engine** is a modular, production-ready projection platform designed to provide users with a multi-functional, ready-to-use DLP[®] solution.

The flexible, scalable architecture of the CEL5500 allows for a variety of illumination configurations to meet research, development and volume production needs.

The CEL5500 is designed for high-brightness, monochromatic applications such as 3D Printing, Microscopy, Machine Vision and Medical Imaging.

The CEL5500 utilizes Texas Instruments' DLP5500 0.55" XGA Chipset from the best-selling LightCommander™ platform. The CEL5500 also uses the same LightCommander API & CELconductor Control Software, so users can easily transfer and utilize the same custom code as well as projects.

CEL5500 ILLUMINATION CONFIGURATIONS



CEL5500 - LED



CEL5500 - Fiber

The **CEL5500 - LED** uses a single-channel Red, Green, Blue, or UV (405nm) LED DLP5500 0.55" XGA Chipset

The **CEL5500 - Fiber** also enables you to use your own fiber-optic light source. This configuration is an ideal solution for applications requiring greater flexibility over light sources and power levels.

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CEL5500

Compact Embeddable Light Engines

SPECIFICATIONS

Configurations	CEL5500-LED (R, G, B, or UV 405nm) CEL5500-Fiber CEL5500-LED + Fiber Assembly CELscope User Configurable Options
Controller Board	DLPC200
DMD	DLP5500 .55" XGA Series 450 DMD
Support Chips	DLPC200 DLPA200
Window Coating	VIS
Wavelength*	405nm – 700nm
Resolution	1024 x 768 (XGA)
Micromirror Pitch	10.8µm
Controller Software	CELconductor Control Software DLPC200 API
Controller Interface	USB 2.0 / HDMI
Pattern Rates	1-bit: 5,000Hz 8-bit: 500Hz 8-bit Grayscale Video: 60Hz
USB Transfer Rate**	1fps
On Board Memory	128MB Flash 256MB DDR2
Binary Pattern Storage	968
I / O Triggers	Master/Slave Delay, Pulse
Illumination	LED (R, G, B or 405nm UV) Fiber (5mm or 7mm ferrule diameter)
Design	Modular Optics Design On-Axis, 0% Offset Telecentric Illumination Near-Telecentric projection Compatible with 37mm lens adapter CELscope Ready User Configurable Options
Projection	Throw Ratio: 1.8:1 Working Distance: 300mm - 800mm Projection Width: 160mm - 500mm Pixel Size at Image Plane: 156µm - 488µm Up to 250mW - 300mW (Red & Green) Up to 450mW (Blue) Up to 400mW (405nm) Uniformity: 70%
Dimensions	7" x 3.8" x 3" / 0.5lb
Mounting Options	5x 1/4in- 20 tapped holes on baseplate (mount system to optical tables, small enclosures and tripod stands)

*Designed for use within and warranted for the specified wavelength range. See TI DMD data sheets for all recommended operating conditions

**Typical value, can vary depending upon data compression ratio and PC used



Your DLP[®] & Optics Partner • A Texas Instruments Authorized Design House

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