

**BRYTN's Laser Optical Engine** is a compact projection module that offers greater color reproducibility and eye-safety with greater than 100 ANSI lumens brightness, FHD/ WXGA/ HD resolution, and easy-to-use focus-free features.

It can be applied to various areas such as AI/Hologram/Robot/Automotive/Education/Consumer Electronics as well as Pico Projector.



- ✓ 100 ANSI Lumens
- ✓ WXGA Resolution
- ✓ 50.5 x 49.5 x 30 mm<sup>3</sup>



- ✓ 100 ANSI Lumens
- ✓ WXGA Resolution
- ✓ 44 x 85 x 13.5mm<sup>3</sup>



- ✓ 200 ANSI Lumens
- ✓ FHD/WXGA Resolution
- ✓ 66 x 62 x 34 mm<sup>3</sup>

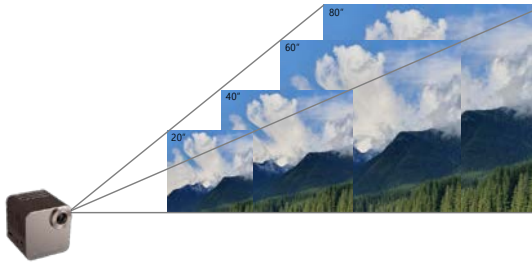


- ✓ 100 ANSI Lumens
- ✓ WXGA Resolution
- ✓ 8.6" Image Size

## Value & Competitiveness

### Focus-Free Projection

Laser optical technology ensures sharp images that are always in focus in a wide projection area



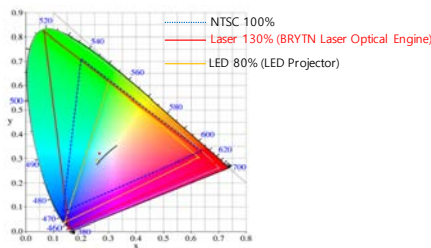
### High-Resolution

Provides excellent image quality with high resolution of WXGA (1366X768), up to FHD(1920X1080)



### Color Gamut (130% superior to NTSC)

Laser has the widest color gamut among the existing light sources, so it is possible to have perfect color reproduction power of R/G/B three primary colors



### Power Efficiency

Laser has excellent power efficiency so it consumes less power at the same brightness

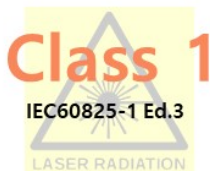
	Power (W)	Efficacy (lm/w)
RGB LED †	6.0	10.6
B Laser+Phosphor ‡	8.3	8.1
RGB Laser †	3.9	16.3

† Measured data, ‡ Modeled data

※ Source : Greg Pettitt et al., "Practical Application of TI DLP® Technology", SID 2015 DIGEST

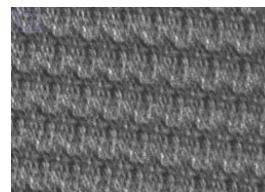
### The world's only laser eye-safety class 1

World's only focus-free and Laser eye-safety class 1 optical engine with 50-200 lumens brightness

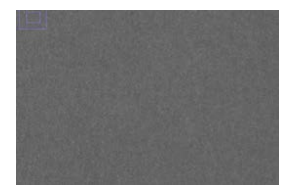


### Low Speckle Ratio < 6%

Development of various speckle abatement technology with speckle ratio less than 6%



w/o Despeckler



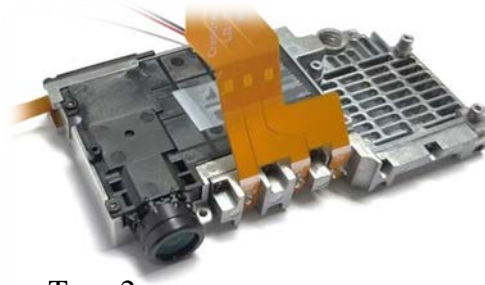
w/ Despeckler

## [ Pico Laser Optical Engine ]

Now Available



Type 1



Type 2



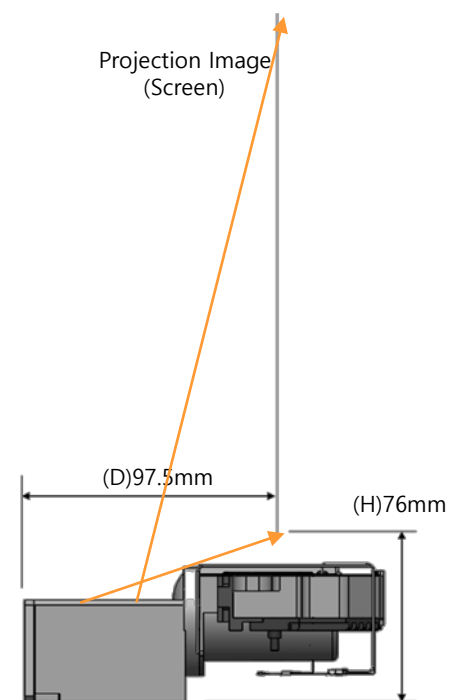
Type 3

### Specification

<b>Resolution</b>	WXGA (1366x768)	<b>Brightness</b>	Type 1&2 : 100 ANSI Lumens(Typical ) Type 3 : 200 ANSI Lumens(Typical )
<b>Panel Type</b>	LCoS (Liquid Crystal on silicon)	<b>Light Source</b>	RGB Laser Diode
<b>Offset</b>	Cube : 100% Bar : 0%	<b>Throw ratio</b>	Type 1 : 1.30 Type 2 : 1.35 Type 3 : 1.30
<b>Focusing</b>	Focus-free	<b>Projection Image Size</b>	20" ~ 100"
<b>Contrast Ratio</b>	> 500:1		
<b>Power Efficiency</b>	Type 1 & 2 : 8W Laser Power, 0.2W Panel @ Optical Engine, 100 Lumens Type 3 : 15W Laser Power, 0.2W Panel @ Optical Engine, 200 Lumens		
<b>Size (DxWxH)</b>	Type 1 : 50.5 x 49.5 x 30 mm <sup>3</sup> Type 2 : 44.1 x 85 x 13.5 mm <sup>3</sup> Type 3 : 66 x 62 x 34 mm <sup>3</sup>	<b>Weight</b>	Type 1 : 81g Type 2 : 56g Type 3: TBD

## [ Holographic Laser Optical Engine ]

Now Available



Side View

### Specification

<b>Resolution</b>	WXGA (1366x768)	<b>Brightness</b>	100 ANSI Lumens(Typical )
<b>Panel Type</b>	LCoS (Liquid Crystal on Silicon)	<b>Light Source</b>	RGB Laser Diode
<b>Focusing</b>	Fixed Focus	<b>Projection Image Size</b>	8.6"
<b>Contrast Ratio</b>	> 250:1	<b>Aspect Ratio</b>	11:18 (Portrait)