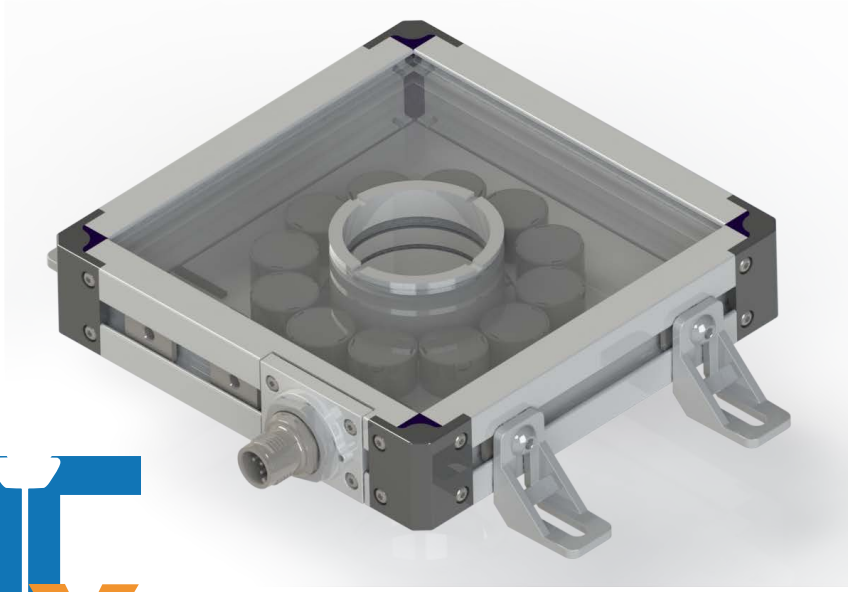
METAPHASE
LIGHTING TECHNOLOGIES

TX Ring Light

Brand New TX Series Design!



- **Flexible Mounting options** from standard aluminum extrusion profile
- **Three standard** port size selections, 34, 47, and 72mm.
- **High-uniformity and brightness**
- **Multispectral** and **Hyperspectral** options

TX SERIES

Features

- Visible, UV, IR, SWIR, Single-Color, Multispectral, Hyperspectral (with individual dimming)
- Smart driver with continuous DC and follow-me strobe 8x overdrive
- Various lensing, diffuser, polarizer, wavelength, size, and connection types available

The New TX Series Square Ring Lights

The latest edition to the Metaphase TX Series of products comes in the form of an ultra compact, yet extremely flexible, square ring light. These lights were designed with the same standard T-slot mounting hardware found on all other TX series products, and provide three main port sizes to choose from over two frame sizes. Also included are a bright and highly uniform array of LED's driven by state-of-the-art driver technology delivering instant start-up and flicker free operation that can be used both in DC continuous mode, or with 8x OpticalPulse-Follow Strobe.

Ordering Info

TXRL

TXRL Part Numbers and Sizes

TABLE 1: PART NUMBER KEY

Contact your Metaphase Sales representative for custom versions (intensity, uniformity, wavelengths, sizes, etc).

Family	Model		Frame		Color		Lens		Diffuser		Connector*
TXRL	XX	_	XXXX	_	XXXXX	_	XXX	_	XX	_	XXX
	1B - Small port size, continuous w/ dimming		**0404** 100mm x 100mm Active Area		**W** (White, 6500K)		**L12** (full angle)		**CC00** - clear cover		**M12A**
					R (Red 630nm)						
					G (Green 530nm)		**L16** (full angle)				
	1C - Small port size, continuous w/ pulse follow strobe				**B** (Blue 470nm)		**L30** (full angle)				
					RGB (Red Green Blue)						
			0606		**UV395**		**L50** (full angle)				
	2B- Medium port size, continuous w/ dimming		150mm x 150mm Active Area		**UV365**						
					IR850						
					IR940				***Other Diffusers AND**		
					IR05				**Polarization Available Upon Request**		
	2C - Medium port size, continuous w/ pulse follow strobe				**IR20**						
					IR30						
					IR45						
					IR55						
	3B - Large port size, continuous w/ dimming				**IR65**						
	3C - Large port size, continuous w/ pulse follow strobe										

**NOTE - Connection option availability may be expanded on for future releases*

DC WITH STROBE (C VERSION)

CAB-FM12FL-3M	3 METER EXTENSION CABLE, PUR FEMALE M12 A-CODE 5-PIN TO FLYING LEADS
CAB-FM12FL-5M	5 METER EXTENSION CABLE, PUR FEMALE M12 A-CODE 5-PIN TO FLYING LEADS
CAB-FM12FL-10M	10 METER EXTENSION CABLE, PUR FEMALE M12 A-CODE 5-PIN TO FLYING LEADS
CAB-FM12FL-15M	15 METER EXTENSION CABLE, PUR FEMALE M12 A-CODE 5-PIN TO FLYING LEADS

TXRL

General		
Operating Temperature:	**0-40°C, 90% RH, non-condensing**	
Storage Temperature:	**0-70°C, 90% RH, non-condensing**	
Compliance:	**RoHs, CE, IEC 62471**	
Photobiological Risk Factor:	**RISK GROUP 1**	
	455, 530, 625, 850, W	
Electrical		
Input Power:	**24VDC+/-5%**	
0-10V Dimming Control:	**Off: 0V | Turn-on Threshold:**	**0.95V**
	100% Intensity:	**10V**
	Max Allowance Voltage:	**24V**
	Input Impedance:	**14kΩ**
Trigger Input (5 KHz Max. Trigger Rate)*:	**PNP**	**Voltage Enable > 2.4V**
	NPN	**Voltage Enable < 0.9V**
	Min Trigger Pulse:	**10 µs**
	Trigger Turn-on Delay:	**10 µs**
	Trigger Turn-off Delay:	**20 µs**
	Input Impedance:	**14kΩ**
**Note: Information above only applies to units designated with a trigger.*		
Overdrive:	**Output:**	**8x**
	Pulse Width:	**< 2ms**
	Duty Cycle:	**< 10%**

Light Operation (1C versions):

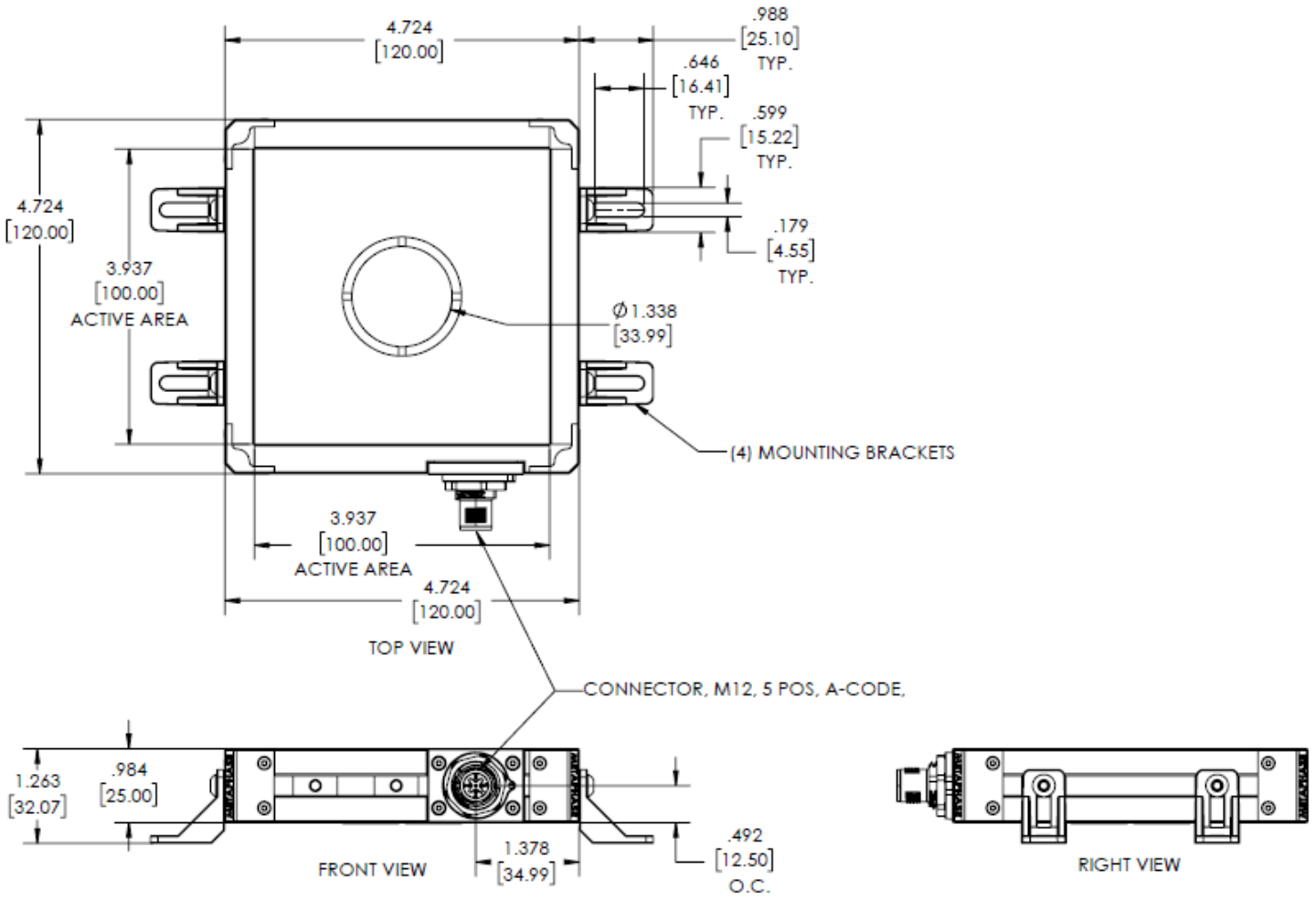
Continuous Mode: The light will illuminate, at full intensity, when 24VDC is applied to the +24V line, 10-24VDC is applied to the 0-10V dimming line, and a continuous voltage > 2.4VDC (up to 24V max) is applied to the trigger line.
The light can be dimmed by proportionally applying a voltage less than 10VDC to the 0-10VDC intensity control while the trigger input requirements are satisfied. User can toggle the light ON/OFF at DC level by turning ON/OFF the 0-10VDC control line.

Strobe operation: Trigger input line uses a "follow me trigger" design where the light will strobe at 8x overdrive* intensity when a pulse is applied to the trigger input for a duration between 2.5us and 2ms, with a duty cycle less than 10%. For trigger pulses that have a duration longer than 2 ms, and/or duty cycle higher than 10%, the light will continue to strobe at 1X intensity (which is equivalent to continuous mode intensity). Strobe mode* also uses 0-10VDC control line where the light will be at FULL intensity when any voltage from 10-24VDC is applied to this control line and proportionally dimmer for voltages less than 10VDC.

**Note 1: 4x overdrive available when PCB without lenses is used, 8x available when PCB with lenses is used.*
**Note 2: 4x overdrive only available with dimming capability.*

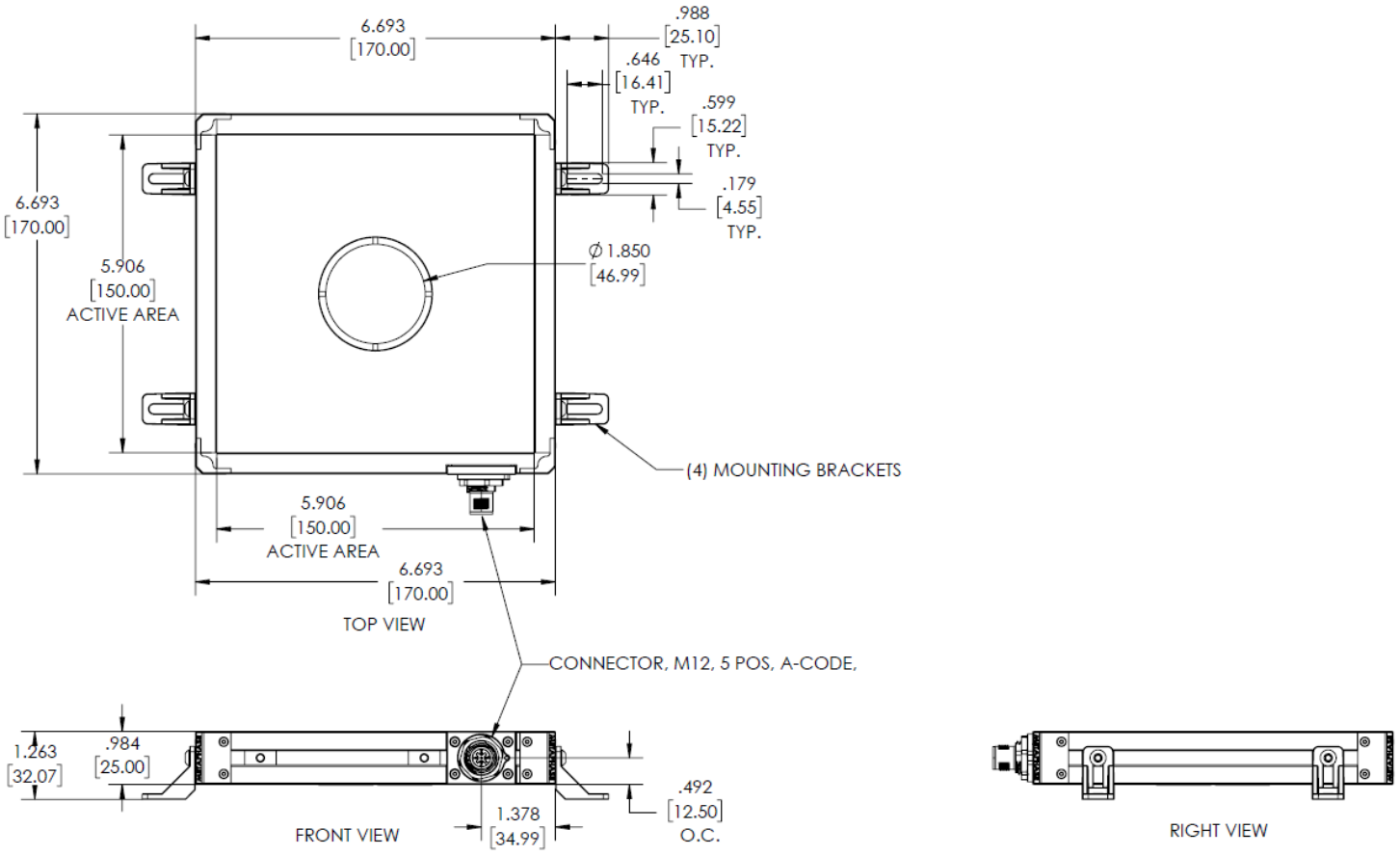
TXRL Mechanical Drawings

TXRL1(x):



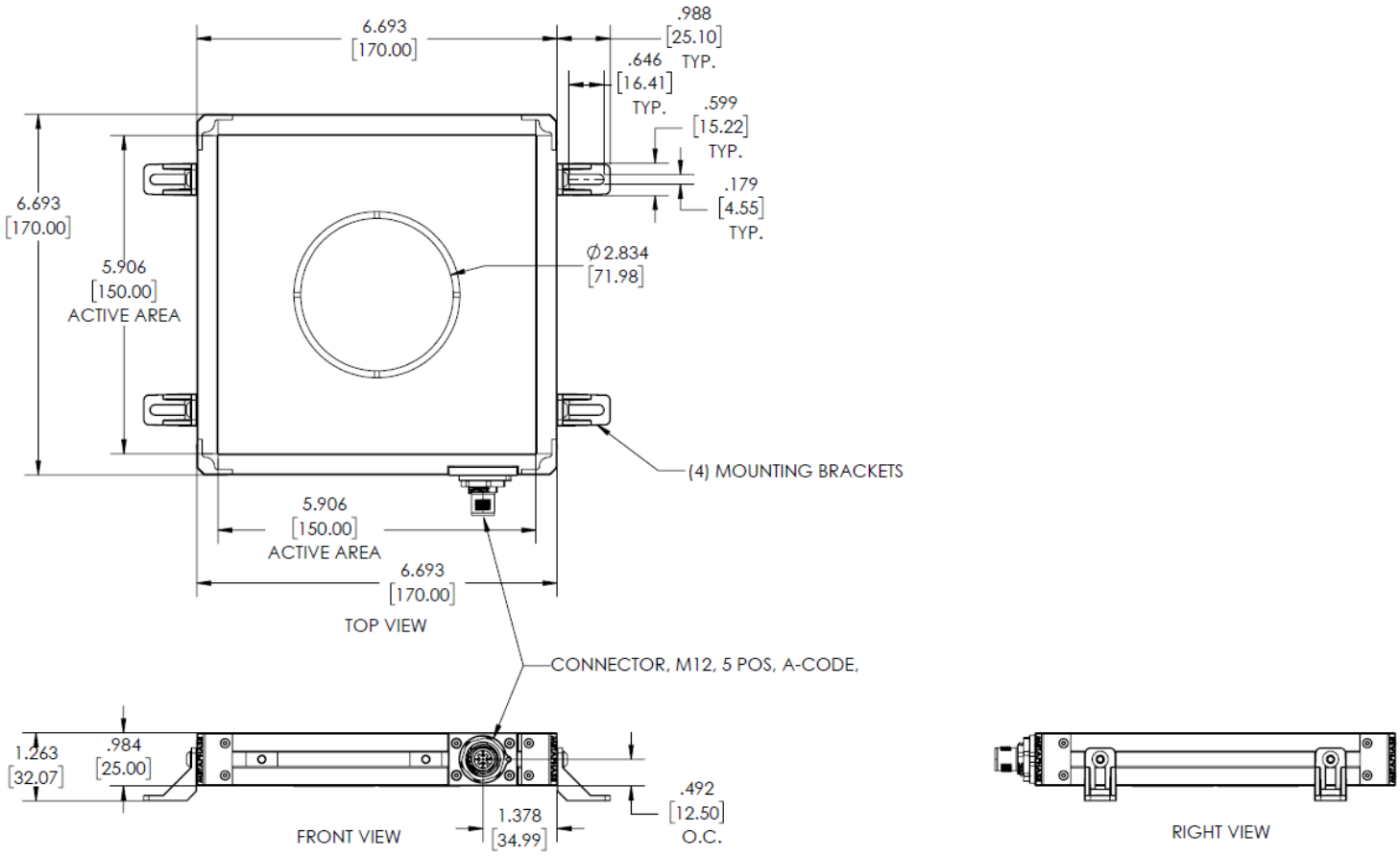
TXRL Mechanical Drawings

TXRL2(x):



TXRL Mechanical Drawings

TXRL3(x):



METAPHASE LIGHTING TECHNOLOGIES

For nearly two decades, Metaphase Technologies has been developing products that implement "The Quality of Light" through engineering and manufacture of cutting-edge LED illuminators for machine vision, military, and specialty lighting applications.

We're proud of our demonstrated expertise engineering flexible lighting solutions that have facilitated integration into thousands of vision systems designs.

Throughout the world, Metaphase clients enjoy the enhanced automation and image capture benefits of our patent-pending breakthroughs in uniform diffuse high brightness and ultra-brightness LED illumination.

First to implement built-in constant curr ent drivers across multiple product lines, Metaphase continues to syner gize cutting-edge LED lighting & contr ol technologies that str eamline innovation and incr eases return on inv estment.

Made in the USA for nearly 30 y ears, our versatile designs are continuously updated to incorporate the latest adv ances in LEDs, thermal management, optics, and electr onic technologies to meet the challenging needs of toda y's global automation and scientific mark etplace.

Contact us to see how Metaphase can help with your cutting-edge lighting needs.

METAPHASE LIGHTING TECHNOLOGIES

200 Rittenhouse Circle, West Unit 7, Bristol, PA 19007 USA
+1-215-639-8699 www.metaphase-tech.com