

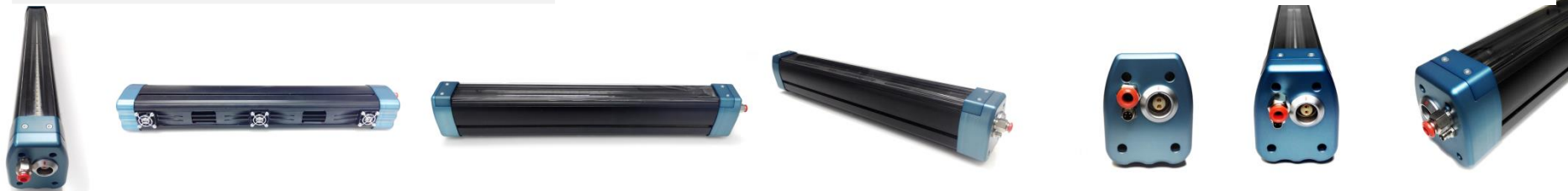
APPLICATIONS

- High Speed Linescan
- Web Inspection
- Print Inspection
- Surface Inspection
- Plastic Film Inspection
- Metal Inspection

INDUSTRIES

- Automotive
- Food & Beverage
- Medical
- Packaging
- Pharmaceutical
- Printing
- Semi-conductor
- Solar
- Waste Management
- Wood

High intensity controllable LED light lines



TENSOR

KEY FEATURES

- Over 1 million Lux
- Excellent uniformity 1.5%
- High brightness LED
Light sources
- Available in lengths
up to 5m
- IP54 & IP65
- Visible and IR as standard
- Custom wavelengths
- Intensity control (RS 485 or 0-10v)
- Thermal cutout protection
- Multiple diffuser options
- 3 Cooling options in one
envelope
- Field changeable protective window
- Dry air inlet & outlet vents for humid operating
conditions
- Compatible for harsh environments



TENSOR

CONTROL OPTIONS

Tensor HB

High Brightness LEDs 10mm Pitch.
Factory set up uniformity of $< \pm 1.5\%$
Stored offset to enable stable dimming over the whole range
Dimming via 0-10v analogue signal

Tensor HBC

High Brightness LEDs controlled over RS 485 in 50mm sections
In field adjustment of profile/ uniformity
Pre set dimming and profile storage
Temperature monitoring every 100mm along the profile
Average temperature monitoring
Time run monitoring
Dimming either over the RS 485 or 0-10v

OPTICAL CONFIGURATIONS

FT (Focused Front Light) - Fresnel Lens + Clear Window

LD (Focused Front Light for Specular Reflection) - Fresnel Lens + 1D Diffuser + Clear Window

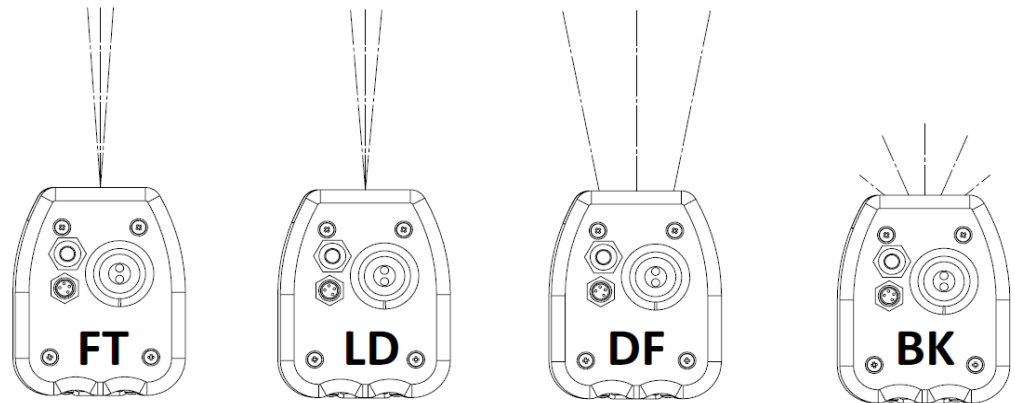
DF (Divergent Front Light) - 1D Diffuser + Diffuse Reflector + Clear Window

BK (Back Light) - 2D Diffuser + Diffuse Reflector + Clear Window

Other optical configurations available upon request

Example: FC (Collimated) FT variant with collimating lens

WF (Front Light)- No Diffuser, No Lens, Reflector and Clear Window



TENSOR

COLOUR RANGE

Standard

Neutral White (NWH), Cool White (CWH), Warm White (WWH)
Red (625nm), Blue (470nm), Green (530nm), IR (850nm)

Custom

Custom wavelengths available on request including UV

Wavelength (nanometers)

400 500 600 700



COOLING OPTIONS

Passive Cooled



Fan Cooled

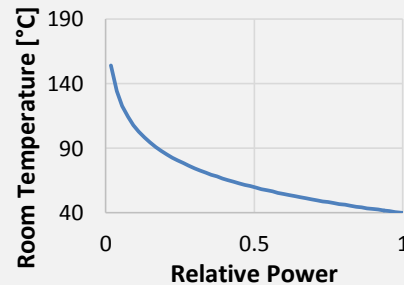


Liquid Cooled

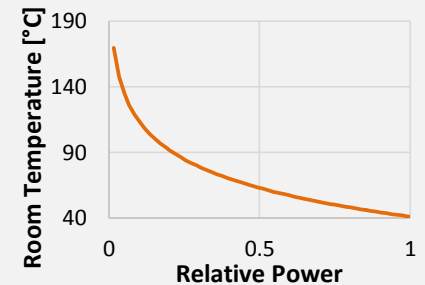


ENVIRONMENTAL PERFORMANCE

Air Cooled Tensor



Fan Cooled Tensor



TENSOR

KEY DATA (Peak intensity values) Length = 1m

	FT OPTION	LD OPTION	DF OPTION	BK OPTION
NWH	1030 kLux	625 kLux	330 kLux	230 kLux
CWH	1066 kLux	650 kLux	341 kLux	238 kLux
WWH	1000 kLux	606 kLux	320 kLux	223 kLux
Red	515 kLux	312 kLux	165 kLux	95 kLux
Blue	230 kLux	140 kLux	73 kLux	42 kLux
Green	1010 kLux	612 kLux	323 kLux	230 kLux
IR	4315 W/m ²	2622 W/m ²	1380 W/m ²	785 W/m ²

Peak intensity values vary in length. All data value are available from sales@cvrlighting.com

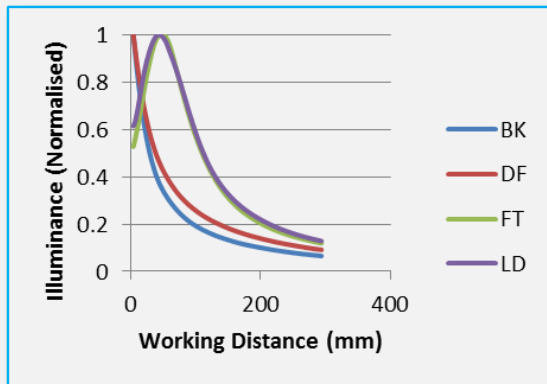
KEY DATA (Peak intensity values) Length = 5m

	FT OPTION	LD OPTION	DF OPTION	BK OPTION
NWH	830 kLux	500 kLux	265 kLux	190 kLux
CWH	860 kLux	520 kLux	275 kLux	190 kLux
WWH	800 kLux	485 kLux	260 kLux	180 kLux
Red	412 kLux	250 kLux	132 kLux	76 kLux
Blue	184 kLux	112 kLux	60 kLux	34 kLux
Green	808 kLux	490 kLux	260 kLux	185 kLux
IR	3452 W/m ²	2100 W/m ²	1100 W/m ²	628 W/m ²

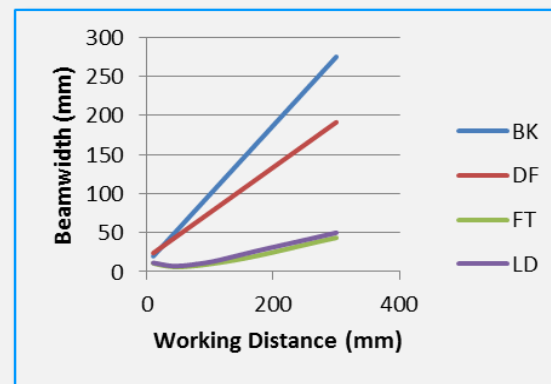
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OPTICAL PERFORMANCE

Intensity versus Working distance, 5 metre length, White (normalised):



Line width versus working distance (White)

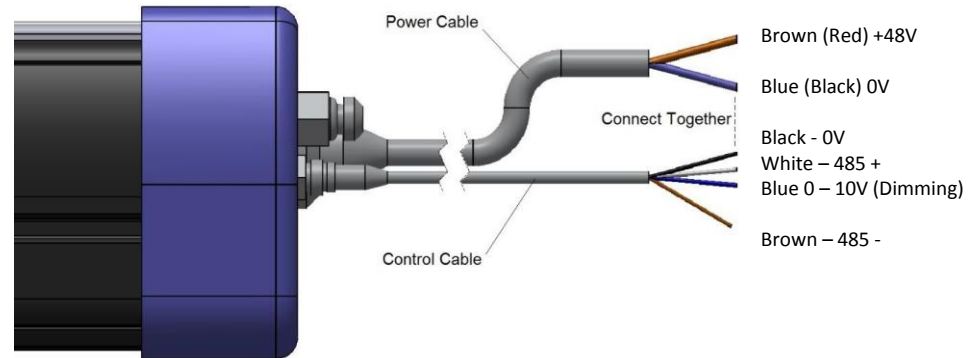


TENSOR

ELECTRICAL CHARACTERISTICS

	Passive	Fan	Water
Unit Length (mm)	Maximum Current Draw (A)	Maximum Current Draw (A)	Maximum Current Draw (A)
1000	2.5	4.4	5.0
2000	5.0	8.8	9.6
3000	7.5	13.2	13.5
4000	10.0	17.5	17
5000	12.5	21.8	20

ELECTRICAL CONNECTIONS



Operating Voltage : 48V

PRODUCT CODES

Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7
Product Family	Cooling Option	Version	Wavelength	Optical Configuration	Aperture Length	Connector
Tensor	PC(Passve) AC (Fan) LC (Water)	HB HBC	NWH CWH WWH 625 nm 470 nm 850 nm	FT LD DF BK	Defined in cm	Standard Lemo Connector

Example 1:

Tensor –Passive cooled - High Brightness LEDs- 470 – Focussed Front light - 2600mm - Flying leads, correspond to Tensor-PC-HB-FT-470-260-C

Example 2:

Tensor – Water cooled - High Brightness Controlled LEDs – Controlled- Back Light - 1500mm - Connector, correspond to Tensor-LC-HBC-NWH-DF-150-C

Accessories

Power Cables

TENSOR-PCAB-020
(Standard 2m Power Cable)
TENSOR-PCAB-050
(Standard 5m Power Cable)
TENSOR-PCAB-100
(Standard 10m Power Cable)

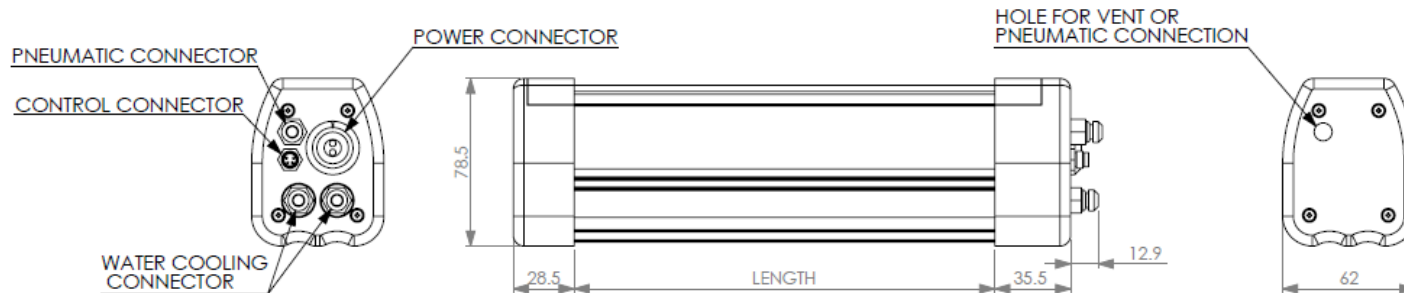
Water Cooler, Power Supplies and Replacement Diffuser parts available on request.

Control Cables

TENSOR-CCAB-020
(Standard 2m Control Cable)
TENSOR-CCAB-050
(Standard 5m Control Cable)
TENSOR-CCAB-100
(Standard 10m Control Cable)

TENSOR

MECHANICAL SPECIFICATIONS

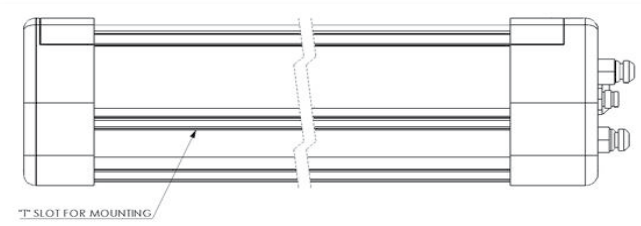


MOUNTING

Mounting is over two T-slots on the adjacent side to the light aperture face.

The nuts (M5) are freely movable over the whole length.

CVR Lighting suggest a minimum of 2 nuts up to 0.5m length plus one more for every additional 0.5m. Additional nuts can be added to the mounting sides if required.



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Specifications are subject to change without notice

NOTES
