



KEY FEATURES

Beam Options: 6 | 10 | 16 | 30 | 50
 Light Engine Performance: 653lm | 8.40W
 Movement: 360 Pan | 90 Tilt
 Tool-less field changeable optics
 Ultra narrow high intensity beams
 Interchangeable accessories
 UK Part L1 / L2 (Display) Compliant



OVERVIEW

Retro 16 is a Constant Voltage single source LED spotlight that is machined from aerospace grade aluminium 6063-T6 and comes as standard in white, black and brushed aluminium along with three premium brass finishes. It has five site-changeable optics for flexible beam distribution. Our 653lm | 8.40W light engine has a max peak intensity of 28223cd. An accessory holder is available separately that can accommodate 55mm (2.16") lenses and louvers. The Jack Plug is compatible with Precision Lighting's 24V Jack systems. The onboard 24V DC driver ensures overcurrent protection and is not polarity sensitive. An external AC to 24V DC power supply is required.

PERFORMANCE

	Intense				
	U. Narrow	Narrow	Medium	Flood	W. Flood
FWHM	6°	10°	16°	30°	50°
Luminous Flux	650 lm	653 lm	623 lm	637 lm	605 lm
Peak Intensity	28223 cd	15476 cd	5671 cd	1652 cd	633 cd
CCT		2700K 3000K 3500K 4000K			
CRI Min.		92 92 92 90			
LED Current		0.700 A			
Voltage		24 V			
Input Wattage		9 W			
Efficacy		77.7 lm/W			
Driver Type		Constant Voltage Remote AC to 24VDC			
Class		SELV Class III			

ORDER CODE

Model	Type	Output	CCT	Beam Angle	Finish
RET16 Retro 16	MJ No mounting ²	IO Intense Output	27K 2700K	UN Ultra Narrow 6°	WH White
	FMJ Flat Monopoint		30K 3000K	NR Narrow 10°	BK Black
	SMJ Surface Monopoint		35K 3500K	ME Medium 16°	AL Br. Aluminium
	NMJ Node Monopoint		40K 4000K	FL Flood 30°	RBZ Rubbed Bronze
	TMJ Trimless Monopoint			WF Wide Flood 50°	BR Br. Brass
	BT Basis Track ¹				PB Polished Brass
	BTW Basis Track Wall ¹				

Example code: RET16-MJ-IO-27K-UN-WH

¹ BT and BTW are available for AL and RBZ only ² MJ requires the specification of a separate mounting point.

See Drivers, Power Supplies and Accessories sections for further order codes

LIGHT ENGINE SELECTION

This product is available with our Intense static white light engine option outlined below.

► intense ◀

Precisions signature intense light engines offer tight, surgical beams combined with the highest peak intensity values available.

- Ultra-tight beams
- High Peak Cd

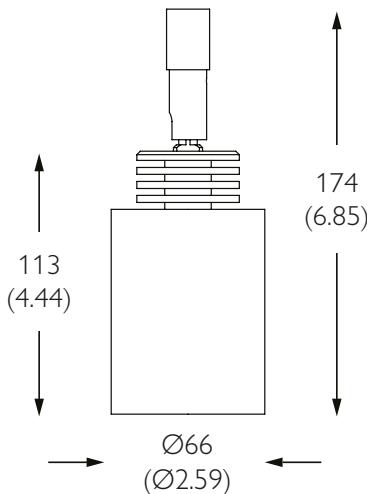
LIFETIME & ENVIRONMENTAL

At Precision, we design and engineer our products with longevity in mind. Many of the components that make up our light fixtures are both modular and re-usable, making it possible to service and repair them throughout their life in service. Once our products reach the end of their useful life, it is possible to re-work and renew them in to a new product. We prioritise the use of recyclable materials in both our products and packaging, and encourage our customers to engage responsibly in the correct disposal of any materials we supply.

CIBSE TM65	18.69 Kg/CO2e
CIBSE TM66	2.4
RoHS Compliance	Yes
REACH Compliance	Yes
WEEE Compliance	Yes - Registered Producer
Declare	LBC Red List Approved
Lifetime	L90B10 100,000hrs
Warranty	5 Years

UK PART L	
Part L1A / L1B (Dwellings) ≥75 lm/W source lumens	Compliant 105 lm/W Source lm (882 lm) / Source W (8.40 W)
Part L2A (General) ≥95lm/W delivered lumens	-
Part L2A (Display) ≥80 lm/W source lumens	Compliant 105 lm/W Source lm (882 lm) / Source W (8.40 W)

DIMENSIONS



MECHANICAL

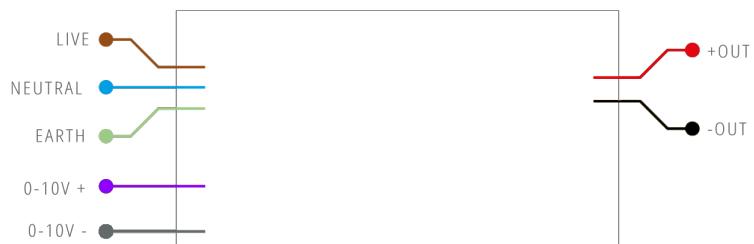
Location	IP20 Indoor Dry Location Only	Cutout	N/A
Mounting	Basis Track 24V Monopoints	Ceiling Thickness	N/A
Adjustability	360 Pan 90 Tilt	Product Class	SELV Class III
Lockable	N/A	Material	Machined AL 6063-T6 Machined Brass
Accessories	Louver Lenses	Weight	440g 0.97lb

FINISHES



100W | 0-10V | Remote | Constant Voltage

Input Voltage	230VAC 50/60 Hz
Driver Type	Remote Constant Voltage
Location	IP20 Indoor Location Only
Dimming Control	0-10V
Min. Dim Level	1.0%
Flicker	IEEE P1789 Compatible No Observable Effect
Wiring Distance	12 AWG - 10m (33')



130W | 0-10V | Remote | Constant Voltage

Input Voltage	230VAC 50/60 Hz
Driver Type	Remote Constant Voltage
Location	IP20 Indoor Location Only
Dimming Control	0-10V
Min. Dim Level	1.0%
Flicker	IEEE P1789 Compatible No Observable Effect
Wiring Distance	12 AWG - 10m (33')



100W | DALI-2 | Remote | Constant Voltage

Input Voltage	230VAC 50/60 Hz
Driver Type	Remote Constant Voltage
Location	IP20 Indoor Location Only
Dimming Control	DALI-2
Min. Dim Level	1.0%
Flicker	IEEE P1789 Compatible No Observable Effect
Wiring Distance	12 AWG - 10m (33')



INSTALLATION

To ensure consistent dimming performance when using monopoints, it is recommended to use a 12 AWG / 4 mm² cable. The increased cross-sectional area of 12 AWG / 4 mm² cable minimizes voltage drop between lights, maintaining consistent brightness levels across the entire circuit, especially when dimmed.

Minimize Total Circuit Length:

- To reduce voltage drop, the total length of the lighting circuit should be kept as short as possible.

Close the Loop:

- Arranging the circuit in a U-shape, L-shape, or ring configuration (by joining the first and last lights) helps to balance voltage distribution.
- This technique effectively reduces voltage variation between lights, promoting uniform brightness.

Wiring in a Ring:

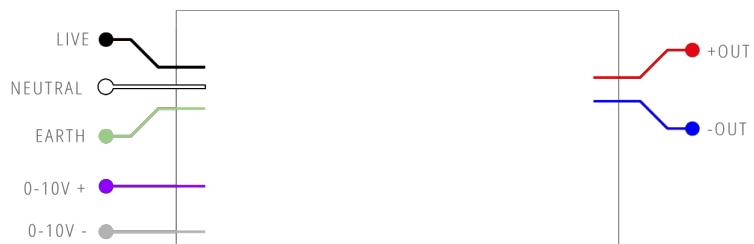
- Creating a ring circuit allows current to flow from both ends, significantly reducing the impact of voltage drop along the line.
- This approach is especially beneficial in larger installations or where long cable runs are unavoidable.

Positioning the Power Supply:

- Place the power supply as centrally as possible to reduce voltage drop to the furthest points.
- Consider using multiple supplies for larger installations to maintain consistent voltage.

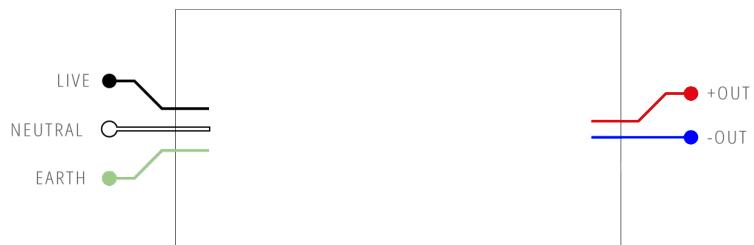
100W | 0-10V | Remote | Constant Voltage

Input Voltage	120-277V 50/60 Hz
Driver Type	Remote Constant Voltage
Location	IP20 Indoor Location Only
Dimming Control	0-10V
Min. Dim Level	1.0%
Flicker	IEEE P1789 Compatible No Observable Effect
Wiring Distance	12 AWG - 10m (33')



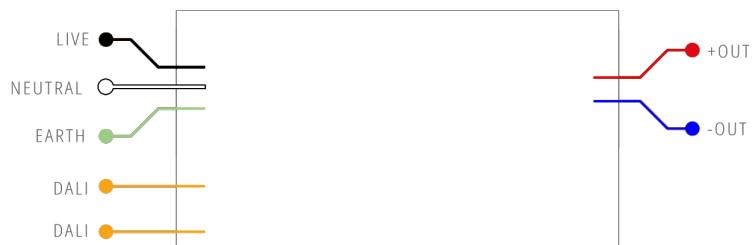
96W | Phase | Remote | Constant Voltage

Input Voltage	120V 50/60Hz
Driver Type	Remote Constant Voltage
Location	IP20 Indoor Location Only
Dimming Control	Phase
Min. Dim Level	1.0%
Flicker	IEEE P1789 Compatible No Observable Effect
Wiring Distance	12 AWG - 10m (33')



100W | DALI-2 | Remote | Constant Voltage

Input Voltage	120-277V 50/60 Hz
Driver Type	Remote Constant Voltage
Location	IP20 Indoor Location Only
Dimming Control	DALI-2
Min. Dim Level	1.0%
Flicker	IEEE P1789 Compatible No Observable Effect
Wiring Distance	12 AWG - 10m (33')



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PHOTOMETRY

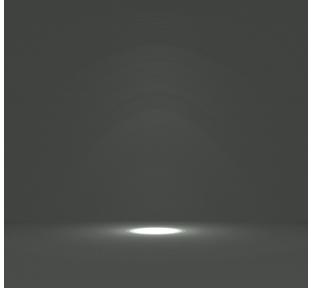
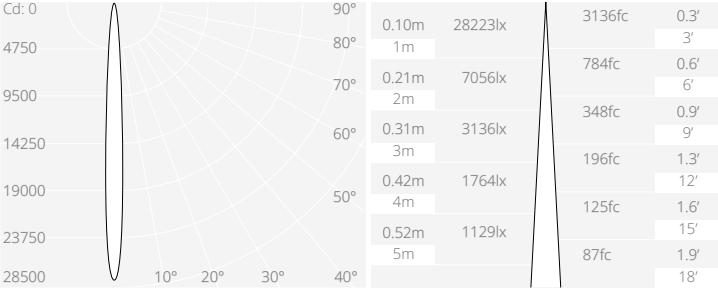
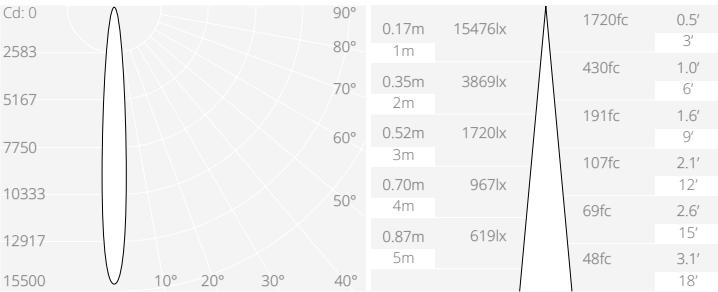
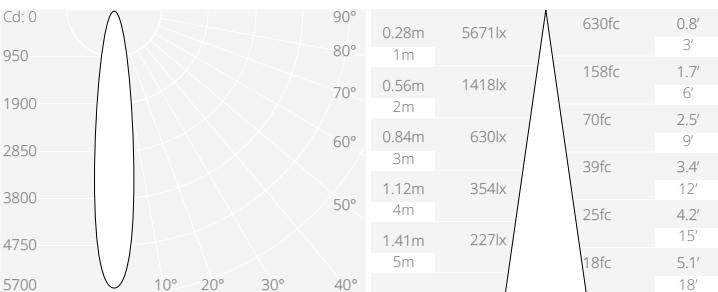
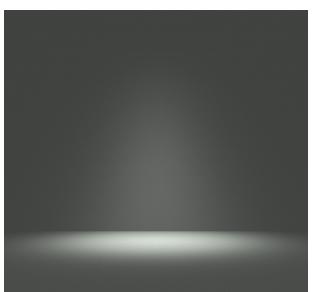
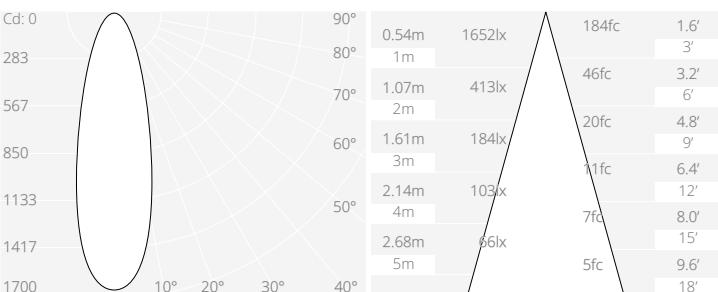
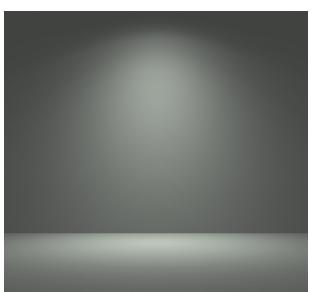
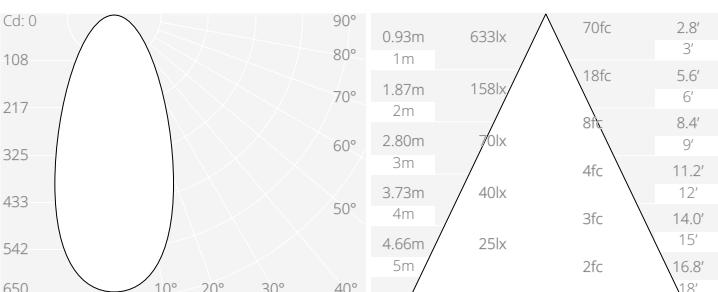
INTENSE LIGHT ENGINE

OUTPUT SCALING

CCT	Output Multiplier	CRI	R9 Typ.	TM-30: Rf	TM-30: Rg	Max Lm
2400K	-	-	-	-	-	-
2700K	0.90	92	50	90	99	588
3000K	1.00	92	50	90	99	653
3500K	1.00	92	50	90	99	653
4000K	1.00	90	50	90	98	653

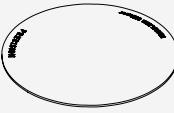
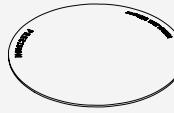
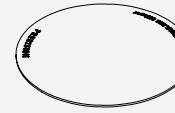
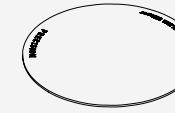
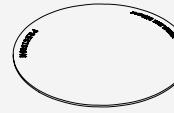
Colour Consistency: 2 SDCM at 2700K / 3000K, 3DCM at 3500 / 4000K

PHOTOMETRY

ULTRA NARROW			
FWHM	6°		
Delivered Flux	650 lm		
Peak Intensity	28223 cd		
NARROW			
FWHM	10°		
Delivered Flux	653 lm		
Peak Intensity	15476 cd		
MEDIUM			
FWHM	16°		
Delivered Flux	623 lm		
Peak Intensity	5671 cd		
FLOOD			
FWHM	30°		
Delivered Flux	637 lm		
Peak Intensity	1652 cd		
WIDE FLOOD			
FWHM	50°		
Delivered Flux	605 lm		
Peak Intensity	633 cd		

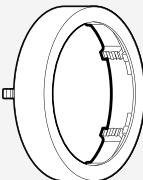
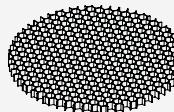
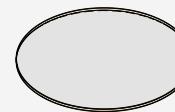
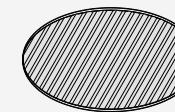
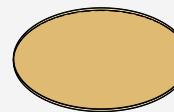
OPTICS

There are 5 tool-less interchangeable optics, cross reference the text on the optic disc for beam.

Optic Disc	Optic Disc	Optic Disc	Optic Disc	Optic Disc
				
Ultra Narrow Disc	Narrow Disc	Medium Disc	Flood Disc	Wide Flood Disc
FWHM 6 deg	FWHM 10 deg	FWHM 16 deg	FWHM 30 deg	FWHM 50 deg
Order Code 931-01	Order Code 931-02	Order Code 931-03	Order Code 931-04	Order Code 931-05

ACCESSORIES

This product can hold 2 x accessories using the double accessory holder. Accessories are pre-installed unless otherwise requested.

Accessory Holder	Glare Control	Beam Shaping	Beam Shaping	Colour Change
				
Double Accessory Holder	Honeycomb Louver	Softening Lens	Linear Lens	1/4 CTO
W63xH14mm W2.48xH0.55" Order Code 254-BK	W55xH3.2mm W2.17xH0.13" Order Code 995-55-BK	W55xH3.2mm W2.17xH0.13" Order Code 991-55	W55xH3.2mm W2.17xH0.13" Order Code 992-55	W55xH1.8mm W2.17xH0.07" Order Code 997-1/4CTO-55



Custom Colour Filter

W55xH1.8mm | W2.17xH0.07"

Order Code

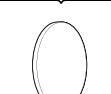
Contact Sales Rep

Linear

Softening

1/4 CTO

Honeycomb



Included with holder

Double Accessory Holder

Can hold 2 accessories

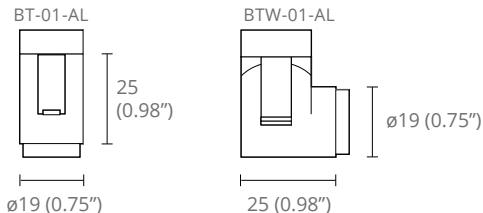
MOUNTING OPTIONS

MOUNTING OPTIONS

BT & BTW - BASIS TRACK

For use with Precision Lighting Basis Track

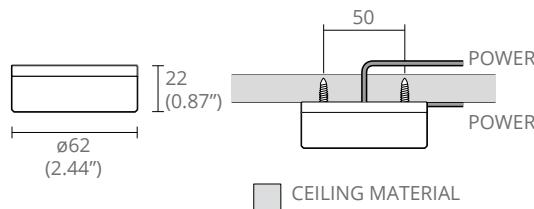
ADAPTOR CODE	FINISH
BT-01-AL	Brushed Aluminium
BT-01-RB	Rubbed Bronze
BTW-01-AL	Brushed Aluminium
BTW-01-RB	Rubbed Bronze



MPZ - SURFACE MONOPOINT

For blind mounting on solid surfaces

MONOPOINT CODE	FINISH
MPZ-01-AL	Brushed Aluminium
MPZ-01-WH	White RAL 9010
MPZ-01-BK	Black RAL 9005
MPZ-01-RB	Rubbed Bronze
MPZ-01-PB	Polished Brass
MPZ-01-SB	Brushed Brass

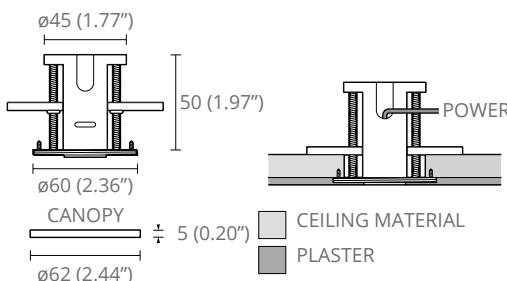


MPS - TRIMLESS MONOPOINT

For use with plasterboard / sheetrock

Note: Canopy not standard, for non-trimless install.

MONOPOINT CODE	FINISH
MPS-01-AL	Brushed Aluminium
MPS-02-AL	Brushed Aluminium
MPS-02-BK	Black RAL 9005
MPS-02-WH	White RAL 9010

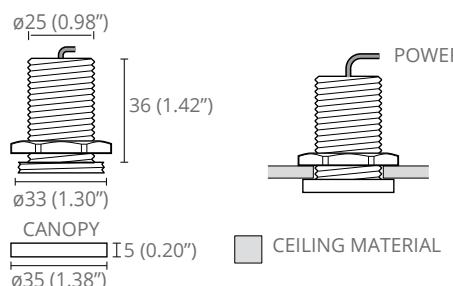


MPY - NODE MONOPOINT

For use in cabinetry

Note: rear access required after install

MONOPOINT CODE	FINISH
MPY-05-AL	Brushed Aluminium
MPY-05-WH	White RAL 9010
MPY-05-BK	Black RAL 9005
MPY-05-RB	Rubbed Bronze
MPY-05-PB	Polished Brass
MPY-05-SB	Brushed Brass



MPX - FLAT MONOPOINT

For use with most mounting surfaces

Note: wiring void required

MONOPOINT CODE	FINISH
MPX-02-AL	Brushed Aluminium
MPX-02-WH	White RAL 9010
MPX-02-BK	Black RAL 9005
MPX-02-RB	Rubbed Bronze
MPX-01-PB	Polished Brass
MPX-01-SB	Brushed Brass

