

MICROBeam MCO Woodworks®

Micro-Aperture Linear Downlight for Wood Ceiling Grids



Integral or Remote Driver

Features & Benefits

Exceptional Performance

Low Glare (UGR<16), Up to 1,000 lm/ft, 110 lm/W efficacy

Wide Range of LED Selections

Static, Tunable White, and Dim-to-Warm

Designed with Options

Wide choice of SmartOptic® lenses, beam distributions, 80/90/95+ CRI, 2200K to 5000K CCT, and 0-10V, DALI, DMX, and TRIAC dimming

Patented Innovations

Fusion® Optix Inside with unique SmartBeam® capabilities

Proprietary Optical Components

Provides excellent light distribution and high-transmission

Committed to Sustainability

Declare Listed and Red Free List materials

Compliance

UL Listed, Dry and Damp Locations

5-Year Warranty

Standard 5-year warranty, 50,000 hours

Designed & Built in
BOSTON

Declare



FIXTURE ORDERING

Project Name

1) FIXTURE DESIGN

Fixture Type

PRODUCT	MODEL	FIXTURE FINISH	MCO FINISH
MBE-MCO-WW			
Micro-Aperature Linear Downlight for Wood Ceiling Grids	6C 6 CELL (6.75") 12C 12 CELL (11.875") 18C 18 CELL (17.875") 2 2ft/24" Nominal 4 4ft/48" Nominal 8 8ft/96" Nominal X_IN Specify (inches)	MWH Matte White (RAL9003) MBK Matte Black (RAL9005) MGR Matte Gray (RAL7001) CAE Clear Anodized Effect RAL_ Specify RAL#	BMC Black Face/ Metal Cell WMC White Face/ Metal Cell

2) LED LIGHT ENGINE

CRI	CCT	BEAM PATTERN	LUMEN OUTPUT
S80 Std. 80 CRI	22 2200K	DMCO45 Micro Cavity Optics 45°	35 350 lm/ft
S90 Std. 90 CRI	27 2700K	DMCO35 Micro Cavity Optics 35°	50 500 lm/ft
HE80 High-Eff. 80 CRI	30 3000K	DMCO25 Micro Cavity Optics 25°	75 750 lm/ft
HE90 High-Eff. 90 CRI	35 3500K	X_ Specify Beam	100 1,000 lm/ft
HD95 High-Def. 95 CRI	40 4000K		X_ Specify lm/ft
SUN Full SunLike	50 5000K		
SBIOS Static BIOS	3022D 3000K to 2200K Dim-to-Warm		
DBIOS Dynamic BIOS	3527D 3500K to 2700K Dim-to-Warm		
TBIOS Tunable White BIOS	X_ Specify CCT		

3) FIXTURE POWER & CONTROLS

LINE VOLTAGE (DC)	REMOTE DRIVER (POWER)	REMOTE DRIVER BOX ¹¹	CONTROL SYSTEM ³
UNV 120/277V	FDND Factory Non-Dimming	NN Not Needed	NN Not Needed
347 347V	FD01 Factory 0-10V 1% Dim	RLDB² Remote Linear Driver Box (driver included by default)	LUT Lutron
	FD10 Factory 0-10V 10% Dim	RX2D² Optional Remote XBox2 Driver, Up to 2 Drivers	COO Cooper
	FDDA Factory DALI 0.1% Dim	RX3D² Optional Remote XBox3 Driver, Up to 3 Drivers	CAS Casambi
	FDDX Factory DMX Dim	RX5D² Optional Remote XBox5 Driver, Up to 5 Drivers	X_ Specify Control System
	FDTR Factory TRIAC Dim		
	LD01 Lutron Hi-Lume 1% Dim		
	LD05 Lutron 5-Series 5% Dim		
	ED00 eldoLED 0-10V 0.1% Dim		
	ED01 eldoLED 0-10V 1% Dim		
	EDDA eldoLED DALI 0.1% Dim		
	X_ Specify Driver		

4) ACCESSORIES & CONNECTIONS

POWER CORD	MOUNTING KIT
S24WH 24" White Cable Kit	SWSMB Stainless Steel Wood Surface Mounting Bracket
S24BK 24" Black Cable Kit	

Footnotes: ¹ Remote distance is dependent on driver type, up to 100' (30.5 m). ² Creates a clean and organized power solution for multiple fixture installations.³ The control system and driver must be compatible.

NOTES

Project Name

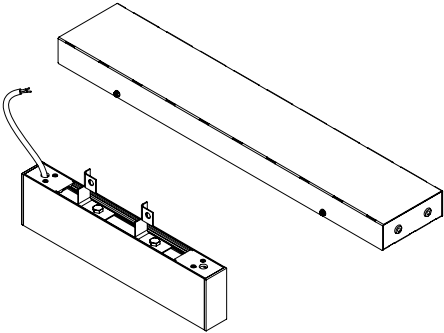
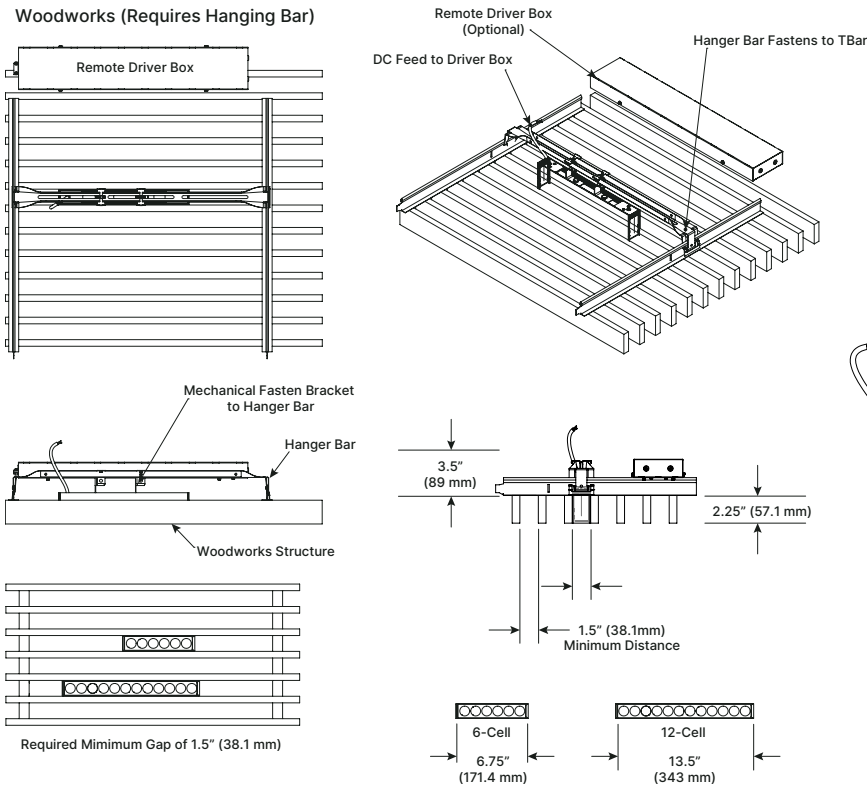
Fixture Type

DESIGN

Dimensions

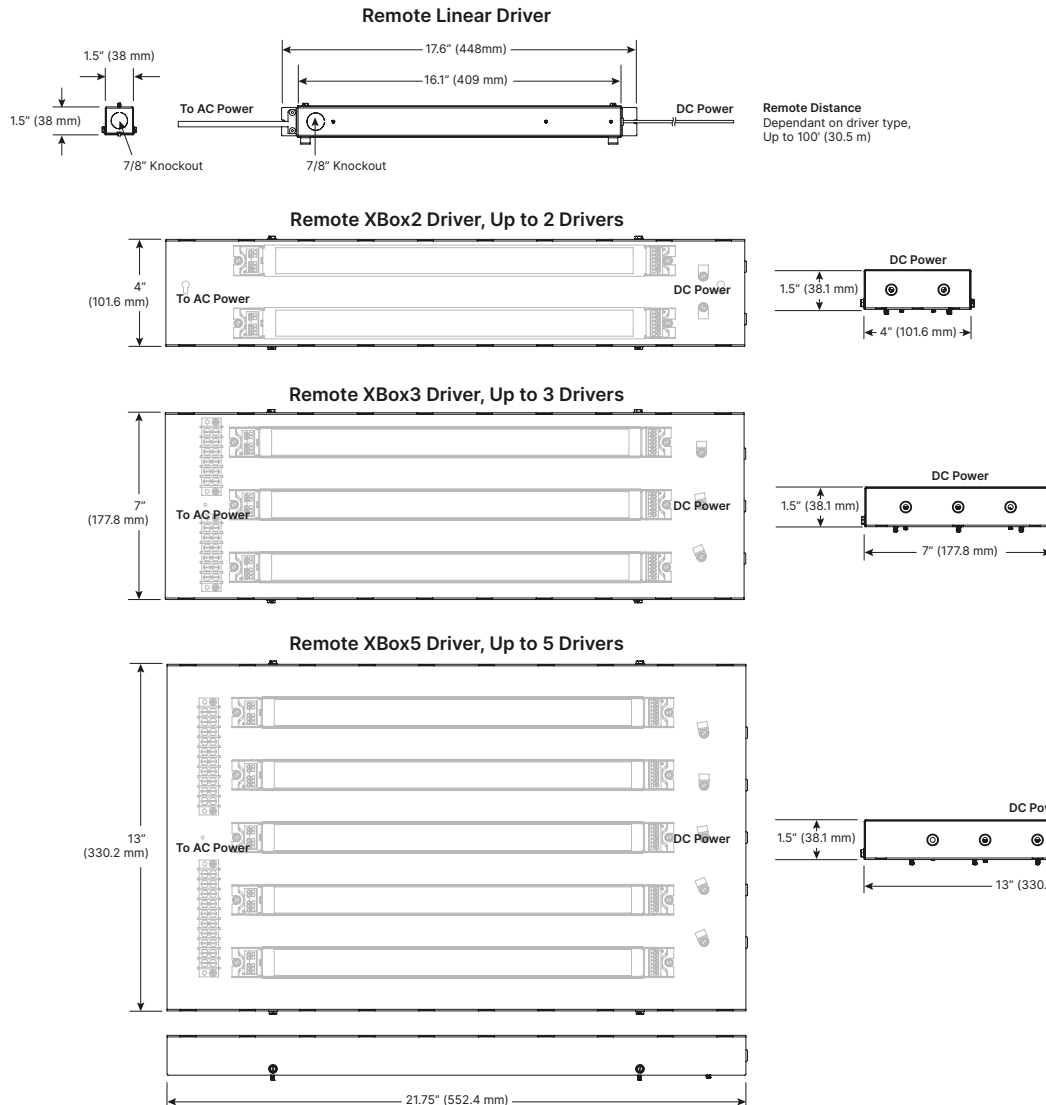


Micro Cavity Optics



REMOTE DRIVER BOX

Dimensions



To download BIM (Revit) Files, please click or scan the QR Code.

Finish

Housing Colors (Matte Finish)



White (RAL9003)



Black (RAL9005)



Gray (RAL7001)



Clear Anodized Effect



Custom RAL

Housing Material

6063-T5 extruded, recycled aluminum

Mounting Brackets

Sheet metal

Optic

Lens Option

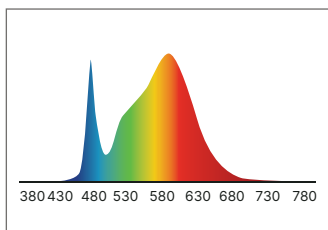
Micro Cavity Optics

Lens Material

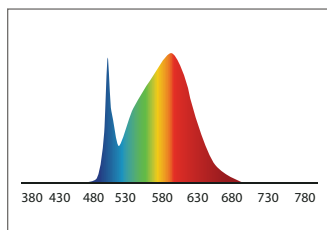
Patented SmartOptics® made from Acrylic (PMMA)

LED SELECTION GUIDE

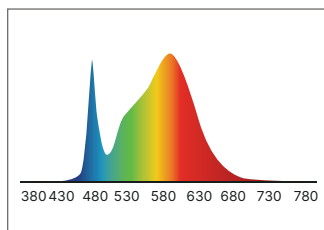
S80: Standard 80+ CRI



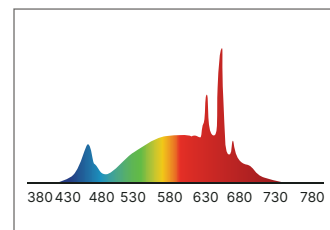
S90: Standard 90+ CRI



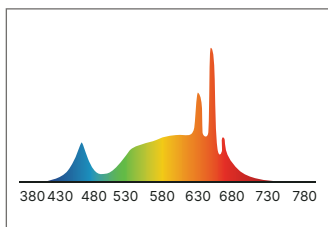
HE80: High-Efficiency 80+ CRI



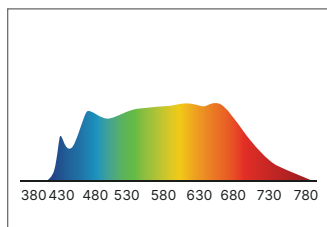
HE90: High-Efficiency 90+ CRI



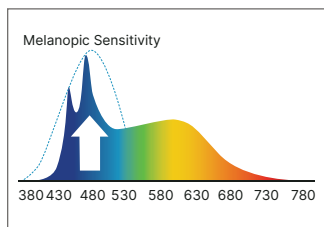
HD95: High-Definition 95+ CRI



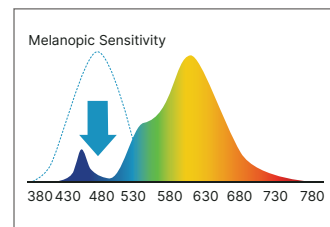
SUN: Full Spectrum "SunLike"



HCD: Human Centric Day



HCN: Human Centric Night



Static White Light (LED Light Engine Only)

CODE	DESCRIPTION	TYPICAL LED DATA							
		CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	M/P Ratio	LPW
S80	Standard 80 CRI	3500K	82.5	7.8	84	96.7	82.5	0.51	190
S90	Standard 90 CRI	3500K	91	54.3	89.3	98.9	89.2	0.55	175
HE80	High Efficiency 80 CRI	3500K	82.1	5.9	83	94.2	81.2	0.52	210
HE90	High Efficiency 90 CRI	3500K	92.2	90	90.7	103.8	92.1	0.56	190
HD95	High Definition 95 CRI	3500K	97.1	95	–	–	–	0.70	163
SUN	Full Spectrum SunLike®	3500K	95	85	–	–	–	–	130
HCD	Human Centric Day	4000K	83	95	–	–	–	0.92	155
HCN	Human Centric Night	2700K	80	–	–	–	–	0.44	134

LPW Efficacy Conversion Chart

CODE	CCT SELECTED							
	2200K	2700K	3000K	3500K	4000K	5000K	5700K	6500K
S80	–	0.91	0.96	1.00	1.04	1.11	1.11	1.11
S90	–	0.91	0.96	1.00	1.04	1.11	1.11	1.11
HE80	–	0.96	0.99	1.00	1.03	1.04	1.03	1.03
HE90	–	0.91	0.96	1.00	1.04	1.11	N/A	N/A
HD95	–	0.91	0.96	1.00	1.04	1.11	1.03	1.04
SUN95	–	0.90	0.92	1.00	1.01	1.07	1.04	1.05
HCD	–	N/A	0.96	1.00	1.04	1.04	1.04	1.04
HCN	–	0.87	0.96	1.00	1.04	N/A	N/A	N/A

BIOS TECHNOLOGY

Choosing Your BIOS Solution

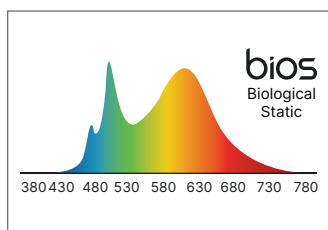
BIOS is offered in four Circadian LED Solutions with BIOS SkyBlue Technology — Biological Static, Biological Dynamic, Biological Tunable, and Biological Dim-to-Warm. BIOS SkyBlue™ Technology includes a blue peak at 490nm that provides an effective daytime circadian signal using standard architectural color temperatures.

bios

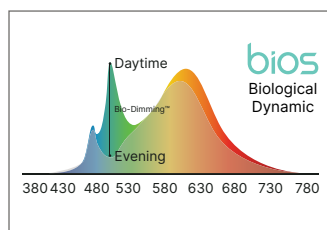
To learn more about BIOS Technology, please click or scan the QR Code.



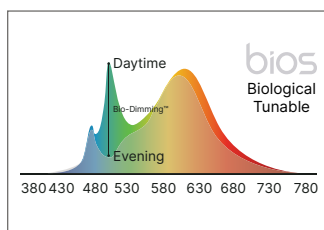
BIOS Static



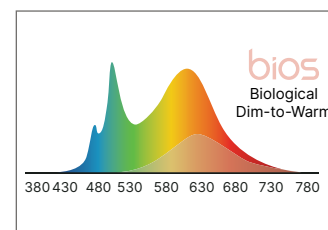
BIOS Dynamic



BIOS Tunable



BIOS Dim-to-Warm



Daytime

No color change when dimmed

Spaces that operate during daytime hours — 7am and 7pm

Daytime & Evening

500K shift when dimmed

Spaces that operate overnight — after 7pm and before 7am

Daytime & Evening

Dims to 2700K

Spaces that operate with overnight shifts — after 7pm and before 7am

Daytime & Evening

Dims from cool to warm

Spaces where people sleep — after 7pm and before 7am

Circadian and Human Centric Light

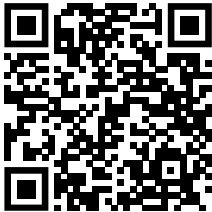
CODE	DESCRIPTION	BIO-DIMMING MODULE TECHNOLOGY GUIDE					
		Driver	Driver Voltage	CCT	Requires BIO-Dimming Module	Lighting Control	BIOS SkyBlue (490nm)
SBIOS	BIOS Static	DIM1	0-10V Dimming to 1% Dim-to-Dark	No CCT Change	No	Intensity Dimming Control Only	Always Present
DBIOS	BIOS Dynamic	BIODIM1	0-10V Intensity Dimming to 1% Dim-to-Dark	500K Shift	Yes	Intensity Dimming & Spectrum Change Controlled Together	Removed with BIO-Dimming
DBIOS-2	BIOS Dynamic (Two Channel)				No	Intensity Dimming & Spectrum Change Controlled Separately	Removed by Adjusting "Spectrum Channel"
TBIOS	BIOS Tunable	ATW / DTW	0-10V Control of Intensity & CCT on Separate 2 Channels / DALI Control of Intensity & CCT on Separate 2 Channels	Dims to 2700K	Yes	Intensity Dimming & Spectrum Change Controlled Together	Removed with BIO-Dimming
TBIOS-2	BIOS Tunable (Two Channel)				No	Intensity Dimming & Spectrum Change Controlled Separately	Removed by Adjusting "Spectrum Channel"
DWBIOS	BIOS Dim-to-Warm	-	-	Dims to 2200K	Yes	Intensity Dimming & Spectrum Change Controlled Together	Removed with BIO-Dimming
DWBIOS-2	BIOS Dim-to-Warm (Two Channel)				No	Intensity Dimming & Spectrum Change Controlled Separately	Removed by Adjusting "Spectrum Channel"

SMARTBEAM® TECHNOLOGY

The Ultimate Control of Lighting Distributions

SmartBeam makes it easy to specify the exact light required for any architectural space. Available in every XICO product; it is now possible to create truly tailored and engaging lighting that transform spaces, improves visual comfort, and saves energy.

To learn more about our SmartBeam Technology, please click or scan the QR Code.



FIXTURE POWER & CONTROLS

Input Voltage

LED Driver Factory Selected, 36–39V Constant Current

Partners



Control Systems

Other	Factory Non-Dimming, Factory 0-10V 1% Dim, Factory 0-10V 10% Dim, Factory DALI 0.1% Dim, Factory DMX Dim, Factory TRIAC Dim, eldoLED 0-10V 0.1% Dim, eldoLED 0-10V 1% Dim, eldoLED DALI 0.1% Dim, and other drivers are available, consult factory (not all integral)
Lutron	Hi-Lume 1% Dimming and 5-Series 5% Dimming
Cooper	Compatible driver
Casambi (wireless)	Compatible driver

XBox

Remote Driver Boxes (Optional)	To create a clean and organized power solution for multiple fixture installations see our Xbox Specification Guide. Reach out to a XICO Sales Representative to discuss you projects needs.
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STANDARDS & CERTIFICATIONS



Declare Listed

Declare labels provide a quick and reliable way to make choices about the environmental footprint and safety of the product. Declare is internationally recognized and the labels can be found on the product, product packaging, or company website. Visit xicoled.com for Declare Listed details.



Red List Free

An industry standard certification for LED lighting products based on the International Living Future Institute (ILFI). These products only use materials based on the “Red List of Toxic Chemicals” (a list of chemicals and materials known to be hazardous to people and/or the Earth) that are safe, healthy, and environmentally sustainable.

Certifications

Compliance

BAA & TAA compliant in-house manufacturing in Boston, MA with North American supply chain

Certifications



Sustainability

Declare Listed and Red List Free

Packaging

Low carbon, environmentally conscious packaging and shipping methods

Environmental Suitability

IP Rating

Suitable for Dry and Damp Locations, indoor use only

Recyclable

SmartOptics and all powder coated and anodized parts are fully recyclable at end of life

Reliability

Manufacturing

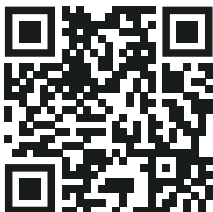
All XICO products and associated optics and LED engines are assembled at our factory in Woburn, MA

Quality Assurance

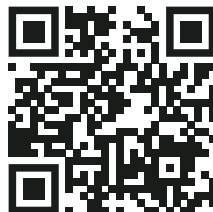
Each product is engineered reliability and quality assurance tested

Warranty & Terms

5-YR Warranty



Business Terms



For details on our warranty and business terms, please click or scan the QR Code.

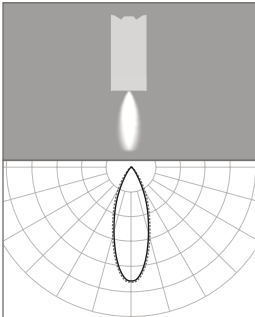
OPTIC			
	DMCO45	DMCO35	DMCO25
Micro Cavity Optics (MCO)	●	●	●

PHOTOMETRICS

Static White Light

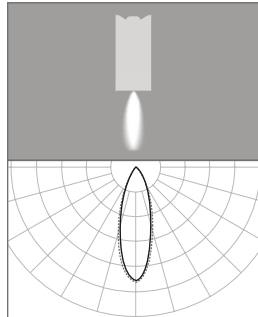
6 Cell (6.75") - Black Body, Black MCO

DMCO45: Micro Cavity Optic 45°



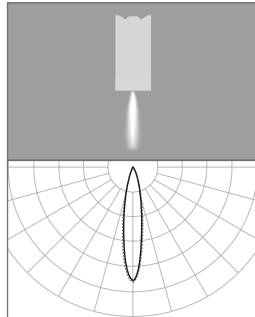
Length 6.75" (6 Cell)
LED HE80
CRI/CCT 80+/3000K
Lumens 850
lm/ft 1511
Watts 11.9
W/ft 21.2
LPW 71

DMCO35: Micro Cavity Optic 35°



Length 6.75" (6 Cell)
LED HE80
CRI/CCT 80+/3000K
Lumens 850
lm/ft 1511
Watts 11.9
W/ft 21.2
LPW 71

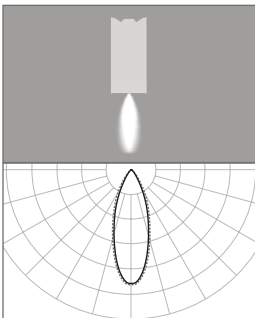
DMCO25: Micro Cavity Optic 25°



Length 6.75" (6 Cell)
LED HE80
CRI/CCT 80+/3000K
Lumens 850
lm/ft 1511
Watts 11.9
W/ft 21.2
LPW 71

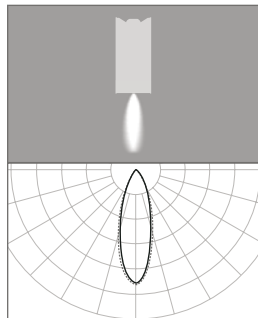
48" Length - White Body, Black MCO

DMCO45: Micro Cavity Optic 45°



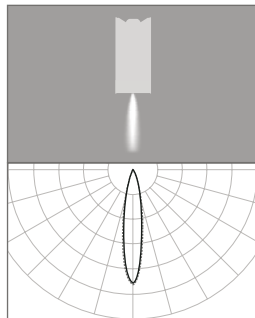
Length 48"
LED HE80
CRI/CCT 80+/3500K
Lumens 3,000
lm/ft 749
Watts 37
W/ft 9
LPW 82

DMCO35: Micro Cavity Optic 35°



Length 48"
LED HE80
CRI/CCT 80+/3500K
Lumens 3,000
lm/ft 749
Watts 37
W/ft 9
LPW 82

DMCO25: Micro Cavity Optic 25°



Length 48"
LED HE80
CRI/CCT 80+/3500K
Lumens 3,000
lm/ft 749
Watts 37
W/ft 9
LPW 82

PATENTS & TRADEMARKS



To learn more about our unique technologies, please click or scan the QR Code.

Utility Patents

United States	US11543582, US11520097, US11512466, US11441749, US11396751, US11333822, US11163104, US11156762, US10852466, US10068447, US8953926, US8948564, US8911099, US8876348, US8794812, US8783898, US8761565, US8750671, US8721152, US8619363, US8430548, US8408775, US8249408, US8231256, US8177408, US8033706, US8033674, US7991257, US7914192, US7784954, US7758227, US7722224, US7542635, US7453636, US7453635, US7431489, US7408707, US7278775, US6369944, US6346311, US6123877, US5932342, US5837346, US20220373144, US20220372752, US20220364708, US20220357006, US20220357005, US20220342141, US20220290432, US20220206210A1, US20220171119A1, US20220171115A1, US20220162856A1, US20220162853A1, US20220146063A1, US20220137287, US20210301991A1, US20200355345A1, US20200217071A1, US20220333765A1, US20220228366A1, US20220196906A1, US20220010554A1, US20080043490A1, US20060290253A1, US20060215958A1, US20120321247, US20120250330, US20120099204
Canada	CA2702600, CA2702685, CA2702690
France	FREP0800658
Germany	DEEP0800658
Great Britain	GB2492541, GB2492542, GBEP0800658, GB2492398
Japan	JP03958359
Netherlands	NLEP0800658
Taiwan	FTW360813B
European Patent Organization	EP0843203, EP0843203

Design Patents

United States	USD719282, USD717973, USD669606, USD669608, USD669609, USD669614, USD663056
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The Patent Corporation Treaty

World Intellectual Property Organization	WO2015200268
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Trademarks

United States	US6672871, US6397231, US6373493, US6257728, US6190558, US6190559, US6142905, US6114408, US6038234, US6025279, US6060740, US6257729, US5856164, US5734112, US5543304, US5309290, US5309315, US4691124, US4640751
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