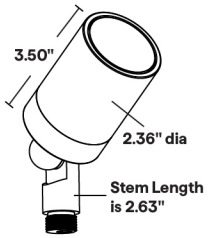
VOYA END MOUNT 2.5" COB WARM DIM

12VAC COB Flood/Accent LED





- Specification-grade, flood/accent lighting with best-in-class lumen output, color quality, dimming performance, and optical control
- Available in ultra-durable powder-coated 6061 aluminum, polished brass, or polished 316L stainless steel
- Flexible tree, surface, wall and ground mounting options support diverse installations
- Warm dim technology shifts from 3000K to a candlelit 1800K
- Wet listed for exterior applications

1 PRODUCT	2 KNUCKLE	3 CRI	4 CCT	5 SNOOT	6 COB	7 BEAM ANGLE	8 MATERIAL	9 FINISH	10 WATTAGE	11 OUTPUT SETTING	12 WEEP HOLE	13 ACCESSORY 1	14 ACCESSORY 2	15 ACCESSORY 3
VOYA-EM-2.5-COB-12VAC-WD	ST	95	18/30		COB				09	N/A				

Sample Part Number: **VOYA-EM-2.5-COB-12VAC-WD-ST-95-18/30-1R-COB-40-A-BK-09-N/A-WPH-SP-N/A-N/A**

1 PRODUCT

VOYA-EM-2.5-COB-12VAC-WD

2 KNUCKLE

ST Standard

3 CRI

95

4 CCT

18/30 1800K/3000K

5 SNOOT

FL Flush
HR 0.5" Regress
1R 1" Regress
30D 30 Degree
45D 45 Degree
60D 60 Degree

6 COB

COB All Other

7 BEAM ANGLE

20 20 Degree
26 26 Degree
40 40 Degree
55 55 Degree

8 MATERIAL

A 6061 Aluminum Anodized and Powder Coated

B Brass H59

SS Stainless Steel 316L

9 FINISH

BG Beige
BB Black Bronze
BK Black
BKT Black Texture
BZ Bronze
BZT Bronze Texture
SL Silver
WH White
CU Custom

Lead times differ. BZT parts are readily available. All other standard finishes are painted upon order. Custom finishes: consult factory

P Polished

Brass and Stainless Steel have longer lead times: consult factory

10 WATTAGE

09 9.5 Watts

Refer to delivered lumen output on following pages

11 OUTPUT SETTING

N/A Not available for these wattages

12 WEEP HOLE

WPH Weep Hole
N/A No Weep Hole

Not using a weep hole while aiming up will void warranty. FL and GZR snoots do not have weep holes. If FL or GZR is chosen, select N/A

13 ACCESSORY 1

SP Spread Lens
LS Linear Spread Lens
WW Wall Wash Lens
LV Honeycomb Louver
N/A No Accessory

Retaining Ring included with each accessory. Accessories not compatible with GZR options.

14 ACCESSORY 2

SP Spread Lens
LS Linear Spread Lens
WW Wall Wash Lens
LV Honeycomb Louver
N/A No Accessory

Retaining Ring included with each accessory. Accessories not compatible with GZR options.

15 ACCESSORY 3

SP Spread Lens
LS Linear Spread Lens
WW Wall Wash Lens
LV Honeycomb Louver
N/A No Accessory

Retaining Ring included with each accessory. Accessories not compatible with GZR options.

5 year warranty | Warranty only valid with QTL power supplies | Field modifications void warranty | Data subject to change, all data has +/- 5% tolerance

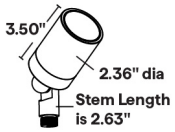
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Specification subject to change. Rev-11-11-26

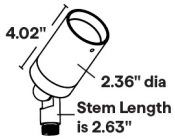
VOYA END MOUNT 2.5" COB WARM DIM

12VAC COB Flood/Accent LED

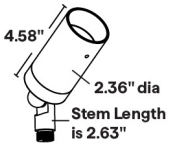
1 PRODUCT - DIMENSIONS



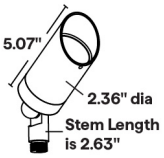
Flush Snoot (FL)



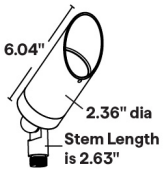
0.5" Regress Snoot (HR)



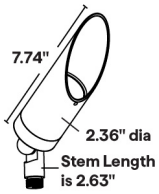
1" Regress Snoot (1R)



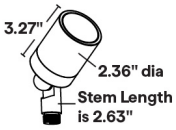
30 Degree Snoot (30D)



45 Degree Snoot (45D)



60 Degree Snoot (60D)



Grazer Snoot (GZR)
*Only to be used with GZR optics

6 DELIVERED LUMENS

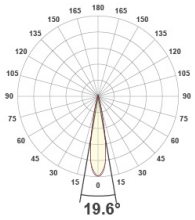
Tested with VOYA-2.5-COB-12VAC-WD-ST-95-30-FL at 9W

COB - BEAM ANGLE	CCT	LUMENS	LM/W	PEAK INTENSITY (CD)	CRI Ra	CRI R9	TM30 Rf	TM30 Rg
COB - 20°	3229	585	61	3540	98	99	94	99
COB - 26°	3232	629	66	2892	98	99	94	100
COB - 40°	3249	629	66	1352	98	99	94	99
COB - 55°	3248	574	60	746	98	99	94	99

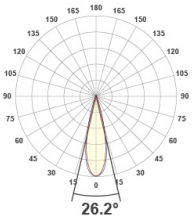
PHOTOMETRIC PERFORMANCE

Nominal beam spread shown, beam spread varies based on light engine. For more detailed information, see photometric data.

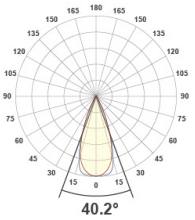
20°



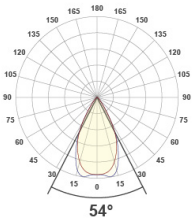
26°



40°



55°



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VOYA END MOUNT 2.5" COB WARM DIM

12VAC COB Flood/Accent LED

9 FINISH

ALUMINUM POWDER COAT FINISHES

Lead times differ. BZT parts are readily available. All other standard finishes are painted upon order. Custom finishes: consult factory



BRASS AND STAINLESS STEEL POLISHED FINISHES

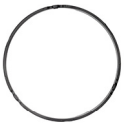
Brass and Stainless Steel have longer lead times: consult factory



13/14/15 ACCESSORIES

Holds up to three accessories. Retaining Ring included with each accessory. Accessories not compatible GZR option.

SP



Spread Lens

To order separately use ACC-2.5-SP

LS



Linear Spread Lens

To order separately use ACC-2.5-LS

WW



Wall Wash Lens

To order separately use ACC-2.5-WW

LV



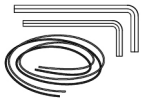
Honeycomb Louver

To order separately use ACC-2.5-LV



Retaining Ring

To order separately use ACC-2.5-RR



SNOOT INSTALL KIT

To order separately use VOYA-SNOOT-INSTALL-KIT

COMPATIBLE GLARE CONTROL ACCESSORIES

VOYA-2.5-45D-GLARE-SHIELD-YY-XX



Adjustable 45° Glare Shield. See Spec Sheet for material (YY) and finish (XX) options

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Specification subject to change. Rev-11-11-26

VOYA END MOUNT 2.5" COB WARM DIM

12VAC COB Flood/Accent LED

COMPATIBLE POWER SUPPLIES

See power supplies cut sheets for more information. Data subject to change, all data has +/- 5% tolerance.

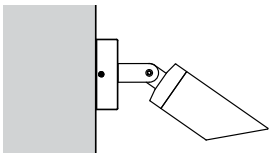
DIMMING PROTOCOL	OUTDOOR
	LANDSCAPE LIGHTING
Phase	Q-HEX Q-SET-1 Q-SET-2 Q-SET-3 QOMD QOMS

VOYA EM/SM 2.5" MOUNT COMPATIBILITY

Landscape Lighting

SURFACE/WALL

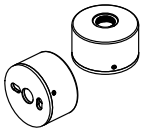
See Surface/Wall installation for dimensions and included hardware. Refer to the mount cut sheets for complete order codes regarding mount's options.





Q-WB

Wood Beam Mount



Q-MT-11*

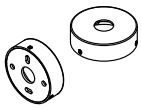
With Water Protection



Q-MT-17*



Q-MT-18

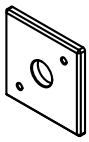


Q-MT-19

With Water Protection



Q-MT-21



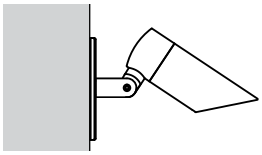
Q-MT-22

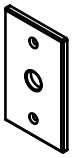


Q-MT-37*

SURFACE/WALL J-BOX PLATES

See Surface/Wall J-Box Plate installation for dimensions and included hardware. Refer to the mount cut sheets for complete order codes regarding mount's options.



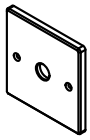


Q-MT-24

Compatible with 1 GANG RECTANGLE WEATHER PROOF J-BOX or 4/0 WEATHER PROOF J-BOX by others



Q-MT-25



Q-MT-26

Compatible with 1 GANG RECESS J-BOX or 4/0 RECESSED J-BOX by others



Q-MT-27

Compatible with 3/0 RECESSED J-BOX by others

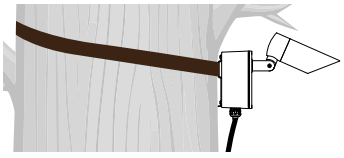


Q-MT-42*

Compatible with 1 GANG RECTANGLE WEATHER PROOF J-BOX or 4/0 WEATHER PROOF J-BOX by others

TREE MOUNT

See Tree Mount installation for dimensions and included hardware. Refer to the mount cut sheets for complete order codes regarding mount's options.





Q-MT-10



Q-MT-12*

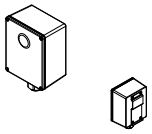


Q-MT-14*

With Tree Strap

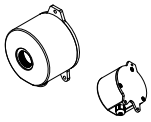


Q-MT-39*



Q-MT-50 (No Driver)

With Water Protection and Tree Strap

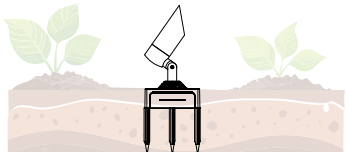


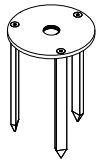
Q-MT-51*

With Water Protection

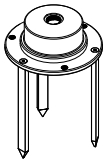
DIRECT BURIAL

See Direct Burial installation for dimensions and included hardware. Refer to the mount cut sheets for complete order codes regarding mount's options.





Q-MT-6*

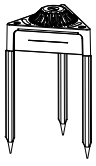


Q-MT-7*

With Water Protection

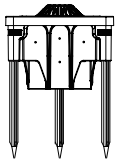


Q-MT-45*



Q-TRIX-R20* (No Driver)

With Water Protection

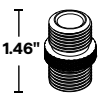


Q-TRIX-R50* (With Driver)

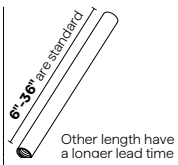
With Water Protection

MOUNT ACCESSORIES

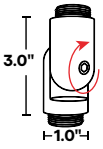
See Accessories installation for dimensions and included hardware.



NPS ADAPTER

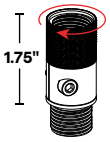


AY-3 Riser Pole



AY-7

No Water Protection



(RA) ROTATIONAL ADAPTER

With Water Protection

***Compatible with AY-3 Riser Pole**

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Specification subject to change. Rev-11-02-26

VOYA EM/SM 2.5" 12VAC COB WARM DIM

Power Supply Sizing & Wiring

SIZING RULES

Every VOYA Circuit should be sized to two limitations:
Power Supply - total connected VOYA load must not exceed 70% of supply's rated wattage
Output Breaker - connected load on each breaker must not exceed 70% of the that breaker's rated capacity (breaker amps x 12V)

The supply's 70% limit caps the total load on the transformer; each breaker's 70% limit caps the load on its own circuit. The lower of the two, controls the number of fixtures

- The 70% factor reflects the VOYA 2.5 integrated driver's power factor (~0.7) at 12VAC input. Higher secondary taps (13V / 14V / 15V) are provided to recover voltage drop on longer runs - they do not increase the load a power supply or breaker can carry, so size all capacity at the 12V tap.
- This VOYA specific 70% guideline supersedes the generic "50% derating for LED retrofit loads" note shown on the QTL's power-supply cut sheets. VOYA 2.5 COB fixtures include an integrated driver (hence not a retrofit LED fixture).

POWER SUPPLIES LOADING EXAMPLE

Max VOYA fixtures per sample power supply ratings (70% rated wattage)

Power Supply Rating	Useable Load (70%)	9.5W
60W	42W	4
100W	70W	7
150W	105W	11
300W	210W	22

OUTPUT BREAKER LOADING EXAMPLE

Max VOYA fixtures per sample breaker ratings (70% breaker capacity)

Breaker	Rated @ 12V	Useable Load (70%)	9.5W
5 A	60W	42W	4
10 A	120W	70W	7
12.5 A	150W	105W	11
25 A	300W	210W	22

DISTRUBUTED & BRANCH CIRCUITS

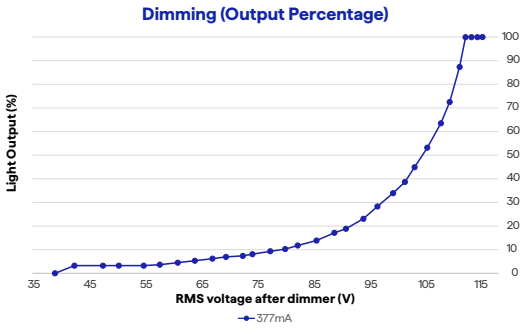
VOYA 2.5 COB can be wired as either a distributed load - multiple fixtures tapped along a run, in branches, or in loop/ring circuits - or as a single load at the end of a run. When wiring as a distributed load, refer to the VOYA 2.5 12VAC wiring guide to size wires within recommended voltage-drop limits. When wiring as a single load at the end of a run, refer to the QTL voltage drop calculator.

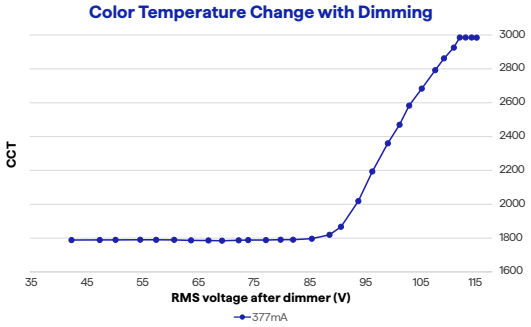
Input voltage at the fixture should be 11.4V–15V AC without dimming. The voltage at the fixture should be 12V–15V AC with dimming. Therefore, taps higher than 12V are recommended when dimming is used.

- Keep every branch and run within both 70% limits and the 12–15V AC fixture voltage window.
- Use the multi-tap secondary (12V / 13V / 14V / 15V) to recover voltage drop on longer runs - tap up to compensate.

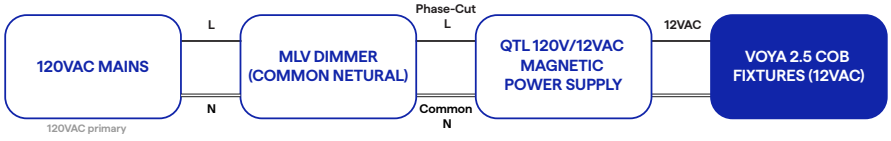
DIMMING

VOYA 2.5 COB Dim to Warm shifts correlated color temperature (CCT) as it dims, warming toward lower CCT at low output. The graphs below show the CCT range and the light output across the dimming range. VOYA 2.5 12VAC COB dims as low as 4% of full output.





Recommended dimmer: Use a magnetic low-voltage (MLV) dimmer with a common (shared) neutral, installed on the line side - upstream of the magnetic power supply. The dimmer phase-cuts the 120VAC primary; the 12VAC secondary is never dimmed directly



MLV Dimmer on the line side - upstream of power supply. 12VAC secondary is never dimmed

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