



# Tetra<sup>®</sup> MS

CHANNEL LETTER LIGHTING SYSTEMS

With powerful OptiLens<sup>™</sup> X  
and groundbreaking energy  
efficiency

**Tetra<sup>®</sup>MS** — the remarkable 24V LED system designed for small channel letters as shallow as 1.5 inches in depth delivers incredibly uniform light, installs easily and operates efficiently. Tetra<sup>®</sup> MS is IP66 and UL wet rated which makes it more robust and reliable even under wet weather.

## Powerful OptiLens™ X

**Tetra® MS** features OptiLens™ X, our patented technology that allows for a true 165° x 140° viewing angle. This exclusive technology redirects otherwise wasted light to the sign face, making sure your signs shine.

## Class-leading loading

Now load up to 90.5 feet (27.6 m) or 362 modules of 24V **Tetra® MS** per 100W power supply using our new and improved GLX2 power supplies.

## Improved stroke spacing

24V **Tetra® MS** stroke spacing has improved, thanks to the new OptiLens™ X wide beam angle. In addition, its new silicone flow channels have increased bonding strength by 10-20%



## Tetra®MS Features

- Wide 165° beam angle
- Improved luminous intensity
- Efficacy: 119 lm/W
- 24 Volt DC, Class 2 (UL), Class III (IEC)
- UL Wet Rated & IP66
- 10-year limited warranty

## Tetra®MS Spacing

Can Depth	Coverage	Multiple Strings
1" (25mm)	2" (51mm)	1.5" (38mm)*
1.5" (38mm)	4" (102mm)	2.5" (64mm)
2" (51mm)	6" (152mm)	5" (127mm)
3" (76mm)	7" (178mm)	5" (127mm)

\*Face material must be at least 3/16" (5mm) thick

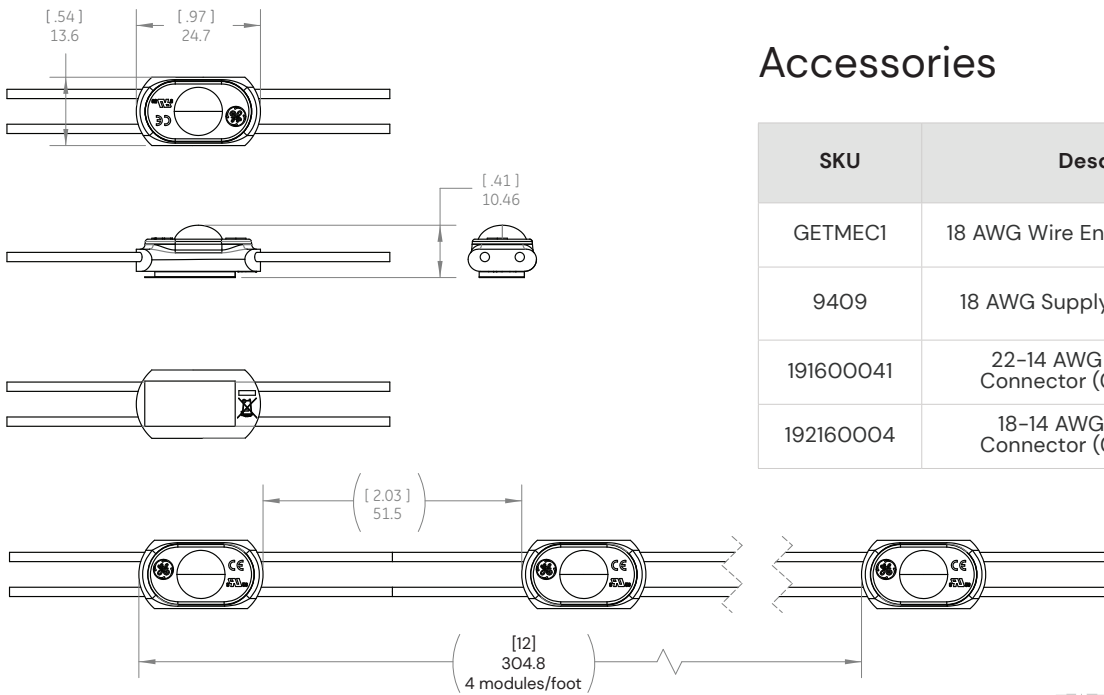
## Total Reliability

To ensure every **Tetra® MS** installation will operate brilliantly for years, we perform the most extensive, stringent testing in the industry. We test the LED, water and dust ingress protection, sub-system and complete system at our in-house and independent laboratories around the world. Validation of our designs, components, products and processes include high temperature, high humidity and accelerated life testing.



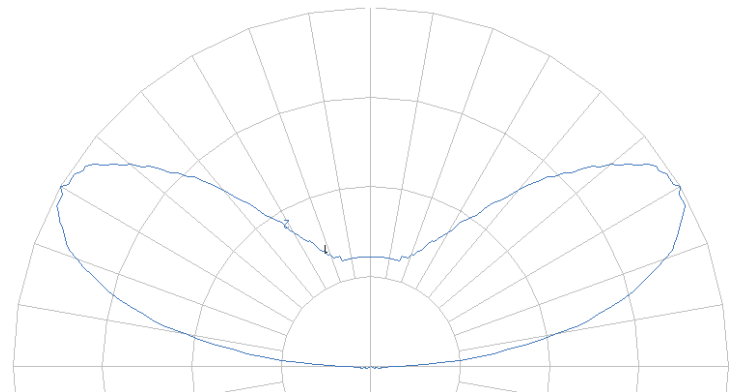
## Mechanical Outline & Viewing Angle

Dimensions in (inches). Metric equivalent mm



## Accessories

SKU	Description	Package quantity
GETMEC1	18 AWG Wire End Caps (0.82 mm <sup>2</sup> )	100/bag
9409	18 AWG Supply Wire (0.82 mm <sup>2</sup> )	500 ft (152.40m)/spool
191600041	22-14 AWG Twist-on Wire Connector (0.33-2.08 mm <sup>2</sup> )	500/bag
192160004	18-14 AWG In-line Splice Connector (0.82-2.08 mm <sup>2</sup> )	500/bag



# Components

SKU	Model	Details	Color	Pkg. Quantity	Modules per strip
93053674	GEMS2471-W1	Tetra® MS 24V 7100K	White	5 Strips/Box	80 modules per strip (20 ft/strip)
93118641	GEMS2465-W1	Tetra®MS 24V 6500K	Warm White	5 Strips/Box	80 modules per strip (20 ft/strip)
93053675	GEMS2450-W1	Tetra® MS 24V 5000K	Warm White	5 Strips/Box	80 modules per strip (20 ft/strip)
93053676	GEMS2441-W1	Tetra® MS 24V 4100K	Warm White	5 Strips/Box	80 modules per strip (20 ft/strip)
93053677	GEMS2432-W1	Tetra® MS 24V 3200K	Warm White	5 Strips/Box	80 modules per strip (20 ft/strip)

## Technical Specifications

Model	Wavelength/ CCT	Typical Brightness Lumens/ module	Typical Brightness Lumens/Ft (Lumens/m)	Energy Consumption Module Wattage	Energy Consumption System Wattage	100W GLX Power Supply Loading	100W GLX2/ TT Power Supply Loading	Viewing Angle
GEMS2471-W1	7100K	27.5	110 (361)	0.24W/module	0.28W/module	85 ft (25.9 m)	90.5 ft (27.6 m)	165°
GEMS2465-W1	6500K	27.5	110 (361)	0.24W/module	0.28W/module	85 ft (25.9 m)	90.5 ft (27.6 m)	165°
GEMS2450-W1	5000K	27.5	110 (361)	0.24W/module	0.28W/module	85 ft (25.9 m)	90.5 ft (27.6 m)	165°
GEMS2441-W1	4100K	27.5	110 (361)	0.24W/module	0.28W/module	85 ft (25.9 m)	90.5 ft (27.6 m)	165°
GEMS2432-W1	3200K	25	100 (328)	0.24W/module	0.28W/module	85 ft (25.9 m)	90.5 ft (27.6 m)	165°

## Additional Specifications

<b>Dimmable</b>	Yes (with dimmable power supply)				
<b>LEDs/Module</b>	1				
<b>LEDs/ft (LEDs/m)</b>	4 (13)				
<b>Modules/ ft. (Modules/m)</b>	4 (13)				
<b>Cutting Resolution</b>	Cut on wire between every module				
<b>Power Supply</b>	GEPS24-25-NA Input: 100-305VAC; Output: 24VDC GEPS24D-80U Input: 90-305VAC; Output: 24VDC GEPS24-100U Input: 108-305VAC; Output: 24VDC GEPS24-200U Input: 90-305VAC; Output: 24VDC GEPS24-300U Input: 108-305VAC; Output: 24VDC				
<b>Maximum Supply Wire Limits</b>		<b>18 AWG/0.82 MM<sup>2</sup> Supply Wire</b>	<b>16 AWG/1.31 MM<sup>2</sup> Supply Wire</b>	<b>14 AWG/2.08 MM<sup>2</sup> Supply Wire</b>	<b>12 AWG/3.31 MM<sup>2</sup> Supply Wire</b>
	25W Power Supply	120 ft./36.6 m	/	/	/
	80W Power Supply	20 ft./6.1 m	25 ft./7.6 m	35 ft./10.6 m	40 ft./12.1 m
	100W Power Supply	20 ft./6.1 m	25 ft./7.6 m	35 ft./10.6 m	40 ft./12.1 m
	200W Power Supply	20 ft./6.1 m	25 ft./7.6 m	35 ft./10.6 m	40 ft./12.1 m
300W Power Supply	20 ft./6.1 m	25 ft./7.6 m	35 ft./10.6 m	40 ft./12.1 m	
<b>Operating Environment</b>	-40 °C to +60 °C (-40 °F to +140 °F)				
<b>Module Dimensions (h x l x w)</b>	0.41" x 0.97" x 0.54" (10.46 mm x 24.7 mm x 13.6 mm)				
<b>Warranty</b>	Limited system warranty of up to ten (10) years				
<b>System Certifications</b>	UL Recognized (C-US) #E219167, UL Classified (C-US) #E229508, CE, ROHS • IP66 rated: for dry, damp or wet location.				