



# EMMA 60S

## MARINE GRADE DOWNLIGHT

Designed for Marine Electrical Instability

IP65 Front Rated | 80V Extended Tolerance | Zero EMI | Integrated Aluminum Driver

Thermal & High Voltage Protection | Custom Sizes & Finishes Available

### STEIN TECHNOLOGY



Automatic Thermal Regulation  
With Adaptive Power Control



Efficient heat dissipation design  
minimizes overheating and  
reduces fire risk.



EMI-Free Operation

### TECHNICAL SPECS

#### ELECTRICAL DATA

|                            |   |
|----------------------------|---|
| System Power               | 5 Watt  |
| Nominal Operating Voltage  | 20-30V DC   |
| Extended Voltage Tolerance | Up to 80V DC (temporary operation)  |
| Energy Efficiency          | Up to 98%   |
| Dimming                    | PWM dimmable (compatible with 1-10V and DALI systems via suitable driver) |

#### OPTICAL PERFORMANCE

|                             |                        |
|-----------------------------|------------------------|
| Luminous Flux               | 600 lm                 |
| Luminous Efficacy           | 120 lm/W               |
| Color Rendering Index (CRI) | ≥90                    |
| Beam Angle                  | 45°                    |
| Rated Lifetime              | L70 lifetime >100,000h |
| Color Consistency           | 3-Step MacAdam Ellipse |

#### PROTECTION & SAFETY

|                                 |   |
|---------------------------------|---|
| Reverse Polarity Protection     | Full electronic protection  |
| Surge Immunity                  | IEC transient protection compliant up to 200V (short-duration spikes) |
| Driver Construction             | Fully integrated aluminum-housed driver (no external plastic box)     |
| Linear Constant Current Driver  | No Switching Frequency  |
| Flicker                         | 0% Flicker (No PWM / No High Frequency Modulation)                    |
| Ingress Protection Architecture | IP65 front exposure / IP64 ceiling cavity protection                  |

#### THERMAL MANAGEMENT

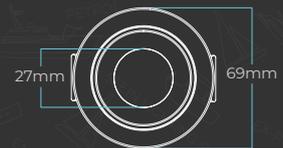
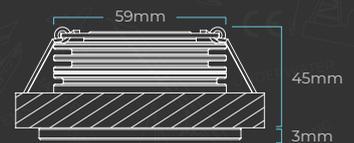
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|---|---|
| Operating Ambient Temperature           | -40°C to +60°C  |
| Max Case Temperature                    | 70°C  |
| Adaptive Thermal Regulation             | Continuous thermal monitoring with dynamic current adjustment |
| Confined-Space Thermal Stability        | Stable operation in low-ventilation ceiling cavities.         |
| Adaptive Overvoltage Thermal Regulation | Automatic current derating under extended voltage conditions  |

### LIGHT COLORS



### DIMENSIONS

These dimensions can be optionally changed

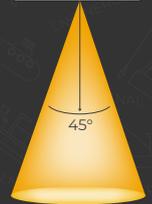
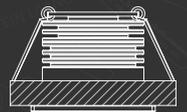


### BEAM ANGLE



Optional

Honeycomb Anti-Glare Optic  
(~20% lumen reduction)



### FINISHES

