

EVERset Programmable Thermal Overload

Overview

The following application note is applicable to Universal Douglas LED drivers that have Programmable Thermal Overload functionality. Compatible Universal Douglas LED drivers will have “Thermal Overload” listed under “Programmable Features” on their spec sheets. Programmable Thermal Overload will reduce the output current as the internal temperature of the driver reaches the programmed set point. This is done to reduce the internal temperature of the driver to avoid thermal stress on the driver.

Thermal Overload

Universal Douglas LED drivers have the ability to program the starting temperature, ending temperature and the final output current of the programmable thermal overload. This feature is disabled by default in compatible Everline LED drivers. It can be enabled by clicking on the “Enable” radio button in the Thermal Overload tab of the EVERset GUI and configuring the following parameters.

Starting Temperature: this is the initial temperature that will trigger the driver to begin the thermal overload foldback protection. The Starting Temperature can be set to a maximum of 89°C.

Starting Temperature



Starting Temperature slider in EVERset.

Ending Temperature: this is the temperature at which the driver will deliver the output current set in the Ending Output Current parameter of the Thermal Overload Feature. This value must be set at least 1°C above the Starting Temperature and the maximum value is 90°C.

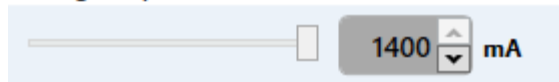
Ending Temperature



Ending Temperature slider in EVERset.

Ending Output Current: this is the output current that will be provided by the driver when the temperature meets or exceeds the value set in the Ending Temperature parameter. The Ending Output Current can be set anywhere between the programmed output current of the driver and the programmed minimum dim current of the driver.

Ending Output Current

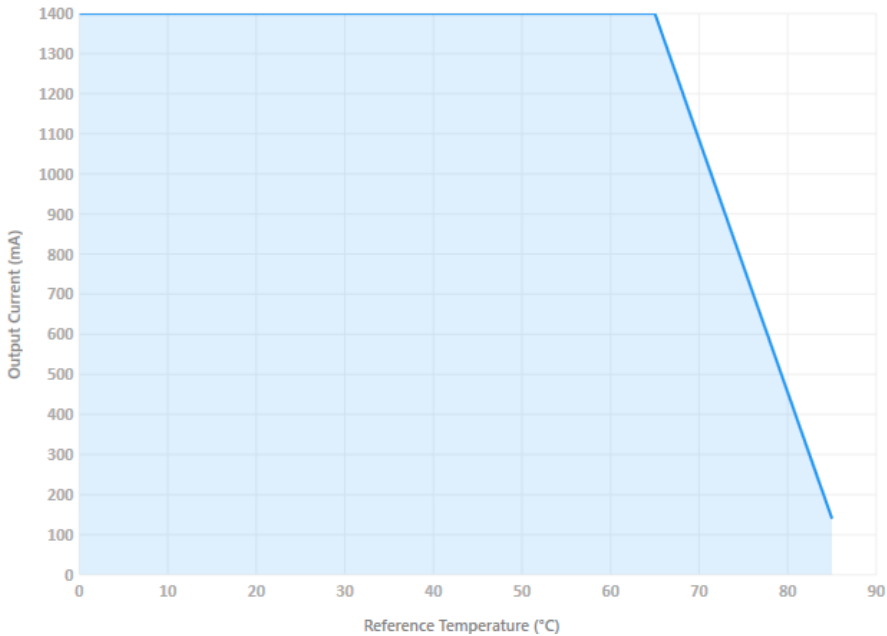


Ending Output Current slider in EVERset.

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Example: D14CC180UNVPWX12-F configured through EVERset with the following parameters:

Starting Temperature: 65°C
Ending Temperature: 85°C
Ending Output Current: 140mA



THEMAL OVERLOAD

Enable Disable

Starting Temperature

65 deg C

Ending Temperature

85 deg C

Ending Output Current

140 mA

Thermal Overload graph and slider values in EVERset.

Note: the mounting of the LED driver into the luminaire, input voltage and load of the driver will all have an effect on the relationship between the internal temperature of the driver and the external case temperature. For best results, the configuration should be tested inside of the luminaire and if necessary, the profile can be updated with any adjustments.