

## T1A1240070P-07EE

Constant current DALI-2 DT6 LED Driver (PUS-DIM + CLO + NFC)



## **FEATURES**

- Supports DALI-2 + PUSH DIM Control + NFC
- Inbuilt CLO Function
- Compliance to DALI-2 PART 101, 102, 207, 251, 252, 253
- DALI Function setting through NFC
  - a. O/P Current setting in step of 1mA.
  - b. Set Min-Max level.
  - c. Set system failure level.
  - d. Set power on level.
  - e. Set address manually 0 to 63.
  - f. Create Groups manually 1 to 16.
  - g. Set Fade time. h. Set fade rate.
  - i. change dimming curve manually Linear OR Logarithmic.
  - j. Set Scenes manually.
- SELV CLASS II Design.
- Dimming range 0.1% to 100%.
- High PF, Low THD, High Efficiency.
- CE, Flicker free.
- Nominal Life 100,000hrs.
- Suitable for indoor use only.

## INTERFACE

- DALI-2 DT6 - PUSH-DIM

## **FUNCTIONS**

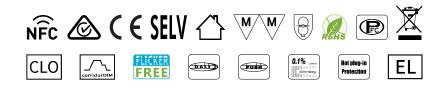
- Memory function
- Suitable for emergency lighting (EL)
- Protection features (short circuit, open circuit, over load, no load, hot plug-in)

#### SUITABLE FOR LIGHTS

- Suitable for Linear lights, tri-proof lights, working lights and other linear or ultra thin lights.

## TYPICAL APPLICATIONS

- LED Indoor lighting.
- LED Office lighting.
- LED Commercial lighting.





# T1A1240070P-07EE

Output voltage range of 2-20Vdc

Flicker-free Output ripple current <5% LF

Output Current: 350 - 700mA

**SPECIFICATIONS** 

Inbuilt CLO Function

Output Wattage : 7W Max

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- LED architectural lighting

- LED panel lamp lighting

- LED indoor lighting

- LED office lighting

Application

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- Dimmable Constant Current 1-Channel LED
  Driver with DALI DT6
- Support DALI dimming function
- Dimming range 0.1 to 100%
- NFC Programable
- DALI PART 101, 102, 207, 251, 252 & 253

## **General Specifications**

Operating Input Voltage Range         196-264VAC, 6060Hz           Input Courrent Max.         0.1@.230Vac           Input Fower         10W           Power Factor         >0.9.@.230Vac Full Load           THD         <15% @.230Vac Full Load           Efficiency (Typical)         70%           Diver Type         Constant Current DALL2           Output Current         350m Å or 70m Å 25% (Current setting through NFC, with step of 0.1mA)           Default Current setting 350m Å         "Refer Output Voltage vs Output current graph           Output Voltage Range         2-20Vdc           Dimming Controller Type         DALL2 (Amplitude/CCR dimming)           Output Type         Class II           Ambient Operating Temperature Range         2-02 to 45° C           Input Surge Protection         2KV           Protections         Output Open Craut           Output Open Craut         Auto Recovery (HICCUP Mode)           Output Surge Protection         2KV           Protections         Enfisity F. Envisity A. Envisity	Rated Input Voltage	240VAC <u>+</u> 10%, 50/60Hz	
Input Power         10W           Power Factor         >0.9 @ 230Vac Full Load           THD         <15% @ 230Vac Full Load	Operating Input Voltage Range	196-264VAC, 50/60Hz	
Power Factor     >0.9.@ 230Vac Full Load       THD     <15% @ 230Vac Full Load	Input Current Max.	0.1 @ 230Vac	
THD       <15% @ 230Vac Full Load	Input Power	10W	
Efficiency (Typical)       70%         Driver Type       Constant Current DALI-2         Output Current       350mA to 700mA ±3% (Current setting through NFC, with step of 0.1mA)         Default Current setting 350mA	Power Factor	>0.9 @ 230Vac Full Load	
Driver Type         Constant Current DALI-2           Output Current         350mA to 700mA ±3% (Current setting through NFC, with step of 0.1mA) Default Current setting 350mA refer           Output Voltage Range         2-20Vdc           Dimming Controller Type         DALI-2 (Amplitude/CCR dimming)           Output tipple current         <5%, Flicker Free at 100Hz	THD	<15% @ 230Vac Full Load	
Output Current         350mA to 700mA ±3% (Current setting 350mA refer Output Voltage Range         220Vdc           Output Voltage Range         220Vdc         220Vdc           Dimming Controller Type         DAL1-2 (Amplitude/CCR dimming)         20000           Output Power         TW         20000         20000           Output Power         TW         20000         20000         20000           Output Power         TW         200000         200000         200000 <td>Efficiency (Typical)</td> <td colspan="2">70%</td>	Efficiency (Typical)	70%	
Default Current setting 350mA         "Refer Output Voltage vs Output current graph         Output Voltage Range       2-20Vdc         Dimming Controller Type       DALI-2 (Amplitude/CCR dimming)         Output Power       7W         Output Power       7W         Output Type       Class H         Number of Output Channels       1 Channel         Output Type       Class H         Ambient Operating Temperature Range       -20°C to 45°C         Max. Case Temperature       85°C         Input Over Current       : Non Resettable (Fuse)         Output Type       Output Open Circuit         Input Over Current       : Auto Recovery (HICCUP Mode)         Output Overload       : XES         Output Overload       : XES         Over Temperature       : Auto Recovery (HICCUP Mode)         Output Overload       : XES         Over Temperature       : Auto Recovery (HICCUP Mode)         Output Overload       : XES         Over Temperature       : Auto Recovery (HICCUP Mode)         Output Overload       : XES         Over Temperature       : Auto Recovery (HICCUP Mode)         EEN61547. EN6100-3-2. EN6100-3-3       EEN6147.1. EN61347-2.13         IEEE1789       : VP-O/P:3750Vac, //P	Driver Type	Constant Current DALI-2	
*Refer         Output Voltage vs         Output Coursent           Output Voltage Range         2-20Vde           Dimming Controller Type         DALL-2 (Amplitude/CCR dimming)           Output Power         7W           Output Ipple current         5%, Flicker Free at 100Hz           Number of Output Channels         1 Channel           Output Type         Class II           Ambient Operating Temperature Range         -20°C to 45°C           Max. Case Temperature         85°C           Input Surge Protection         2KV           Protections         Input Over Current         : Non Resettable (Fuse)           Output Open Circuit         : Auto Recovery (HICCUP Mode)           Output Overload         : YES           Over Temperature         : Auto Recovery (HICCUP Mode)           Output Overload         : YES           Over Temperature         : Auto Recovery (HICCUP Mode)           Output Overload         : YES           Over Temperature         : Auto Recovery (HICCUP Mode)           EINF147, EINF1000-4-2, 3, 4, 5, 6, 8, 11           EIENF1547, EINF1000-4/2, 3, 4, 5, 6, 8, 11 <tr< td=""><td>Output Current</td><td colspan="2">350mA to 700mA ±3% (Current setting through NFC, with step of 0.1mA)</td></tr<>	Output Current	350mA to 700mA ±3% (Current setting through NFC, with step of 0.1mA)	
Output Voltage Range       2-20Vdc         Dimming Controller Type       DALI-2 (Amplitude/CCR dimming)         Output Power       7W         Output tipple current       <5%, Flicker Free at 100Hz		Default Current setting 350mA	
Dimming Controller Type         DALI-2 (Amplitude/CCR dimming)           Output Power         TW           Output ripple current         <5%, Flicker Free at 100Hz		*Refer Output Voltage vs Output current graph	
Output Power       7W         Output ripple current       <5%, Flicker Free at 100Hz	Output Voltage Range	2-20Vdc	
Output ripple current       <5%, Flicker Free at 100Hz	Dimming Controller Type	DALI-2 (Amplitude/CCR dimming)	
Number of Output Channels         1 Channel           Output Type         Class II           Ambient Operating Temperature Range         -20°C to 45°C           Max. Case Temperature         85°C           Input Surge Protection         2kV           Protections         Input Over Current : Non Resettable (Fuse)           Output Short Circuit : Auto Recovery (HICCUP Mode)         Output Output Over Our Temperature : Auto Recovery (HICCUP Mode)           Output Over Temperature : Auto Recovery (HICCUP Mode)         Output Over Temperature : Auto Recovery (HICCUP Mode)           Output Over Temperature : Auto Recovery (HICCUP Mode)         Output Over Temperature : Auto Recovery (HICCUP Mode)           Standards         EN55015, EN61000-3-2, EN61000-3-3           EN61547.1, EN61000-4-2, 3, 4, 5, 6, 8, 11         EN61347-1, EN61347-2, 13           IEEE1789         IEEE1789           Withstand Voltage         I/P-O/P:3750Vac, I/P-FG:1750Vac, O/P-FG:500Vac, I/P-DALI:500Vac           Leakage Current         <0.5mA @ 240Vac	Output Power	7W	
Output TypeClass IIAmbient Operating Temperature Range-20°C to 45°CMax. Case Temperature85°CInput Surge Protection2KVProtectionsInput Over Current : Non Resettable (Fuse) Output Short Circuit : Auto Recovery (HICCUP Mode) Output Open Circuit : Auto Recovery (HICCUP Mode) Output Over tomer : Auto Recovery (HICCUP Mode) Output Over tomer : Auto Recovery (HICCUP Mode) Output Over tomer : Auto Recovery (HICCUP Mode)StandardsEN55015, EN61000-3-2, EN61000-3-3 EN61547, EN61000-3-2, EN61000-3-3 EN61547, EN61000-4-2,3,4,5,6,8,11 EEE1789Withstand VoltageI/P-O/P:3750Vac, I/P-FG:1750Vac, O/P-FG:500Vac, I/P-DALI:500Vac Leakage CurrentVietnestanceI/P-O/P:3750Vac, I/P-G:1750Vac, I/P-DALI:500VacLife50,000 Hours @ 80°CApprovals / ClassSELV EquivalentWarranty5 Years at Tc 80°C	Output ripple current	<5%, Flicker Free at 100Hz	
Ambient Operating Temperature Range       -20°C to 45°C         Max. Case Temperature       85°C         Input Surge Protection       2KV         Protections       Input Over Current : Non Resettable (Fuse)         Output Short Circuit : Auto Recovery (HICCUP Mode)       Output Over Output Open Circuit : Auto Recovery (HICCUP Mode)         Output Overload : YES       Over Temperature : Auto Recovery (HICCUP Mode)         Over Temperature : Auto Recovery (HICCUP Mode)       Output Overload : YES         Over Temperature : Auto Recovery (HICCUP Mode)       EN55015, EN61000-3-2, EN61000-3-3         EN61547, EN61000-4-2,3,4,5,6,8,11       EN6147-1, EN61347-2-13         IEEE1789       IEEE1789         Withstand Voltage       I/P-O/P:3750Vac, I/P-FG:1750Vac, O/P-FG:500Vac, I/P-DALI:500Vac         Isolation resistance       I/P-O/P:100MQ / 500Vdc / 25°C / 70% RH         Life       50,000 Hours @ 80°C         Approvals / Class       SELV Equivalent         Warranty       5 Years at Tc 80°C	Number of Output Channels	1 Channel	
Max. Case Temperature85°CInput Surge Protection2KVProtectionsInput Over Current : Non Resettable (Fuse) Output Short Circuit : Auto Recovery (HICCUP Mode) Output Open Circuit : Auto Recovery (HICCUP Mode) Output Overload : YES Over Temperature : Auto Recovery (HICCUP Mode)StandardsEN55015, EN61000-3-2, EN61000-3-3 EN61547, EN61000-3-2, EN61000-3-3 EN61547, EN61000-4-2,3,4,5,6,8,11 EN61347-2-13 IEEE1789Withstand VoltageI/P-O/P:3750Vac, I/P-FG:1750Vac, O/P-FG:500Vac, I/P-DALI:500Vac Leakage CurrentvoltageV/P-O/P:100MQ / 500Vdc / 25°C / 70% RH LifeLife50,000 Hours @ 80°C Approvals / ClassApprovals / ClassSELV Equivalent S Years at Tc 80°C	Output Type	Class II	
Input Surge Protection       2KV         Protections       Input Over Current : Non Resettable (Fuse)         Output Short Circuit : Auto Recovery (HICCUP Mode)         Output Open Circuit : Auto Recovery (HICCUP Mode)         Output Overload : YES         Over Temperature : Auto Recovery (HICCUP Mode)         Over Temperature : Auto Recovery (HICCUP Mode)         Standards       EN55015, EN81000-3-2, EN61000-3-3         EN61547, EN61000-4-2,3,4,5,6,8,11         EN61547, EN61000-4-2,3,4,5,6,8,11         EN61347-1, EN61347-2-13         IEEE1789         Withstand Voltage       I/P-O/P:3750Vac, I/P-FG:1750Vac, O/P-FG:500Vac, I/P-DALI:500Vac         Leakage Current       <0.5mA @ 240Vac	Ambient Operating Temperature Range	-20°C to 45°C	
Protections       Input Over Current : Non Resettable (Fuse)         Output Short Circuit : Auto Recovery (HICCUP Mode)         Output Overload : YES         Over Temperature : Auto Recovery (HICCUP Mode)         Over Temperature : Auto Recovery (HICCUP Mode)         Standards         EN55015, EN61000-3-2, EN61000-3-3         EN61547, EN61000-4-2,3,4,5,6,8,11         EN61547, EN61000-4-2,3,4,5,6,8,11         EN61347-1, EN61347-2-13         IEEE1789         Withstand Voltage       I/P-O/P:3750Vac, I/P-FG:1750Vac, O/P-FG:500Vac, I/P-DALI:500Vac         Leakage Current       <0.5mA @ 240Vac	Max. Case Temperature	85°C	
Output Short Circuit: Auto Recovery (HICCUP Mode)Output Open Circuit: Auto Recovery (HICCUP Mode)Output Overload: YESOver Temperature: Auto Recovery (HICCUP Mode)StandardsEN55015, EN61000-3-2, EN61000-3-3EN61547, EN61000-4-2,3,4,5,6,8,11EN61347-1, EN61347-2-13IEEE1789Withstand VoltageI/P-O/P:3750Vac, I/P-FG:1750Vac, O/P-FG:500Vac, I/P-DALI:500VacLeakage Current<0.5mA @ 240Vac	Input Surge Protection	2КV	
Output Open Circuit: Auto Recovery (HICCUP Mode)Output Overload: YESOver Temperature: Auto Recovery (HICCUP Mode)StandardsEN55015, EN61000-3-2, EN61000-3-3EN61547, EN61000-4-2,3,4,5,6,8,11EN61347-2-13EN61347-1, EN61347-2-13IEEE1789Withstand VoltageI/P-O/P:3750Vac, I/P-FG:1750Vac, O/P-FG:500Vac, I/P-DALI:500VacLeakage Current<0.5mA @ 240Vac	Protections	Input Over Current : Non Resettable (Fuse)	
Output Overload: YESOver Temperature: Auto Recovery (HICCUP Mode)StandardsEN55015, EN61000-3-2, EN61000-3-3 EN61547, EN61000-4-2,3,4,5,6,8,11 EN61347-1, EN61347-2-13 IEEE1789Withstand VoltageI/P-O/P:3750Vac, I/P-FG:1750Vac, O/P-FG:500Vac, I/P-DALI:500VacLeakage Current<0.5mA@ 240Vac		Output Short Circuit : Auto Recovery (HICCUP Mode)	
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Leakage Current       <0.5mA @ 240Vac		IEEE1789	
Isolation resistance       I/P-O/P:100MΩ / 500Vdc / 25°C / 70% RH         Life       50,000 Hours @ 80°C         Approvals / Class       SELV Equivalent         Warranty       5 Years at Tc 80°C	Withstand Voltage	I/P-O/P:3750Vac, I/P-FG:1750Vac, O/P-FG:500Vac, I/P-DALI:500Vac	
Life     50,000 Hours @ 80°C       Approvals / Class     SELV Equivalent       Warranty     5 Years at Tc 80°C	Leakage Current	<0.5mA @ 240Vac	
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Warranty 5 Years at Tc 80°C	Life	50,000 Hours @ 80°C	
	Approvals / Class	SELV Equivalent	
Weight 0.07 Kg	Warranty	5 Years at Tc 80°C	
	Weight	0.07 Kg	
Note : Suitable for indoor application only			

Fulham extends a limited warranty only to the original purchaser or to the first user for a period of <u>05 years @ Tc 80°C</u> from the date of manufacture when properly installed and operated under normal conditions of use. For complete terms and conditions, please reference the Fulham Product Catalog (www.fulham.com). Due to a program of continuous improvement, Fulham reserves the right to make modifications or variations in design or construction to the equipment described. © Fulham Company Limited, All Rights Reserved.

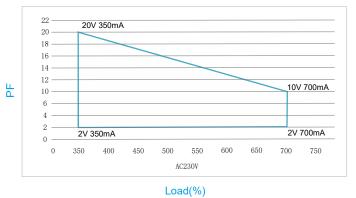
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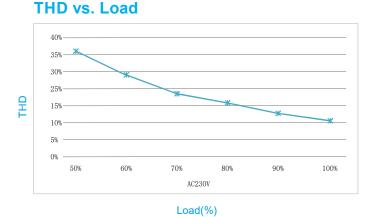


**SPECIFICATIONS** 

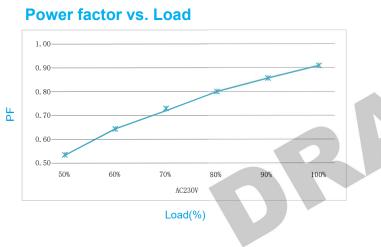


## **Output Voltage Vs Output Current**

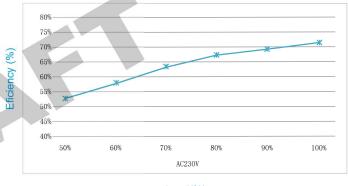




\* Default Current - 350mA

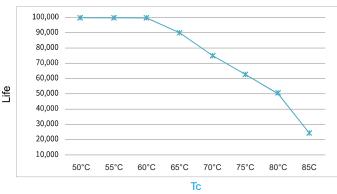


Efficiency vs load

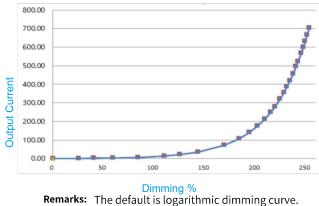


Load(%)

## Life vs. Tc curve



## **Dimming Curve**

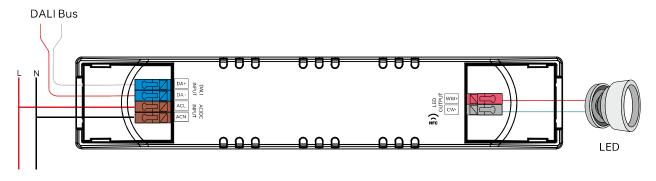


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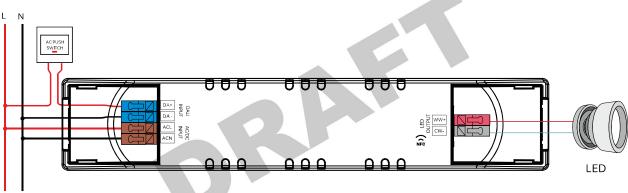
## **DALI dimming application**



## Activating DALI control mode

- After installation according to the wiring diagram of DALI control application, the driver will automatically switch to the DALI control mode after receiving any DALI command.

## PUSH dimm



### Using PUSH DIM controls:

After installation according to the wiring diagram of PUSH-DIM control application,

1. Press PUSH switch it will increase the Brightness, release the witch and again press PUSH switch it will Reduce the Brightness.

## Multiple lights synchronize control operation

method 1: Step 1:long press the PUSH-DIM switch, confirm each light is on.

Step 2:short press the PUSH-DIM switch, confirm each light is off.

Step 3:long press the PUSH-DIM switch, confirm each light is from darkest to brightest and all the lights are synchronous.

method 2: - Long press the PUSH-DIM dimming switch for more than 15s, all drivers will output 100% brightness and the color temperature is natural white (middle of color temperature range).

#### **Remarks:**

- Standard DALI control line voltage range:9.5V to 22.5V, type 16V.

- The two DALI control lines polarity-reversible.

- Max. 64 DALI drivers per DALI control line.
- The maximum distance length of the DALI control line is 300m at  $2 \times 1.5$  mm<sup>2</sup>.
- DALI bus can be wired together with any mains voltage cables, but separate wiring is recommended.

#### Wiring distance vs cable size

Cable size	Distance
2×0.50mm <sup>2</sup>	max.100m
2×0.75mm <sup>2</sup>	max.150m
2×1.00mm <sup>2</sup>	max.200m
≥2×1.50mm <sup>2</sup>	max.300m

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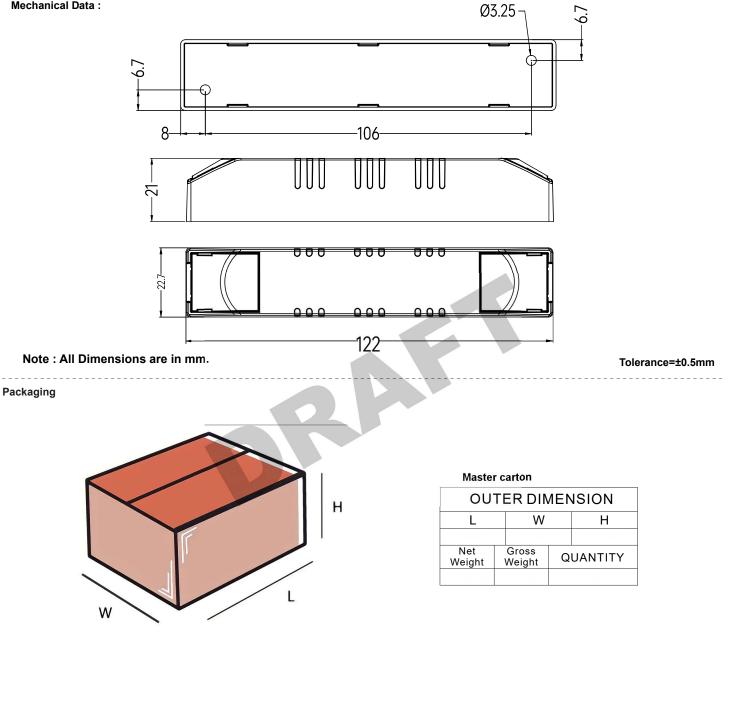


T1A1240070P-07EE

**SPECIFICATIONS** 



**Mechanical Data :** 



Installation Instructions:

Connect Wires as per details given on the Driver Screen. Keep proper ventilation around the LED Driver and do not stack any object on it. Also a 10-15 cm clearance must be kept when the adjacent device is a heat source. Do not exceed the declared Hot spot temperature(Tc max) under any circumstances.

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