Programmable Multi-Channel Driver
PMD-75D-LU

SLP-DUA475D1US

Key Features

- Programmable, adjustable constant output current which can be adjusted to match LED module requirements

- Device Type 8 (DALI), PMD supports IEC 62386-209 standard command and represents the color temperature of a light Source

Basic Features

Series.	Part Number	Max. Power	Function	Input Voltage	Output Voltage	Output Current	Certification
PMD-75D-LU	SLP-DUA475D1US	75W	0-10V	120~277Vac	10~50Vdc	0.35~1.4A	cUL

- Certification : UL8750, UL Class2 Power, 47 CFR Part15 Subpart B
- Protections : Short Circuit, Over Temperature, Open Lamp, Over Voltage
- ta Range : -20 ~ +50 °C
- Expected Lifetime : 50,000 hours at tc = 70 °C

PMD Series

Series.	Part Number	Max. Power	Function	Input Voltage	Output Voltage	Output Current	Certification
PMD-75C-LU	SLP-DUA47531WW	75W	0-10V, DALI	120~277Vac	10~50Vdc	0.35~1.4A	cUL, CE
PMD-75A-L	SLP-DUA47501US	75W	0-10V	120~277Vac	10~50Vdc	0.35~1.4A	cUL
PMD-75D-L	SLP-D2A475D1EU	75W	DALI	220~240Vac	10~50Vdc	0.35~1.4A	CE, ENEC
PMD-75D-LU	SLP-DUA475D1US	75W	DALI	120~277Vac	10~50Vdc	0.35~1.4A	cUL
PMD-55A-L	SLP-DUA45501US	55W	0-10V	120~277Vac	10~50Vdc	0.35~1.4A	cUL
PMD-55D-L	SLP-D2A455D1EU	55W	DALI	220~240Vac	10~50Vdc	0.35~1.4A	CE, ENEC
PMD-55D-LU	SLP-DUA455D1US	55W	DALI	120~277Vac	10~50Vdc	0.35~1.4A	cUL
PMD-55A-S	SLP-DUA4550AUS	55W	0-10V	120~277Vac	10~50Vdc	0.35~1.4A	cUL
PMD-35A-L	SLP-DUA43501US	35W	0-10V	120~277Vac	10~50Vdc	0.35~1.4A	cUL
PMD-35D-L	SLP-D2A435D1EU	35W	DALI	220~240Vac	10~50Vdc	0.35~1.4A	CE, ENEC
PMD-35D-LU	SLP-DUA435D1US	35W	DALI	120~277Vac	10~50Vdc	0.35~1.4A	cUL
PMD-35A-S	SLP-DUA4350AUS	35W	0-10V	120~277Vac	10~50Vdc	0.35~1.4A	cUL
PMD-25A-S	SLP-DUA0250AUS	25W	0-10V	120~277Vac	10~50Vdc	0.35~1.0A	cUL
PMD-25D-SU	SLP-DUA025DAWW	25W	DALI	120~277Vac	10~50Vdc	0.35~1.0A	cUL, CE, ENEC

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1. Electrical Specification

Article	Symbol	Specification			Unit	Note
		Min.	Typ.	Max.		
INPUT SPECIFICATIONS						
Nominal Voltage	Vin	120		277	Vac	Full input range
Voltage Range		108		305	Vac	
Nominal Frequency	fin	50		60	Hz	
Frequency Range		47		63	Hz	
Input Current	Iin			0.8	A	@ 120Vac
Input Current	Iin			0.3	A	@ 277Vac
Total Harmonic Distortion	THD			20	%	@ full load, 120-277 Vac
Power Factor	PF	0.9			-	@ full load, 120-277Vac
Efficiency	H	83	88		%	@ full load, 120-277 Vac,
Protection Class			I		-	PE can be connected to either terminal or housing
Inrush Current				20	Apk	t_{width} = Typ. 300 μs @ 50% Ipeak)
OUTPUT SPECIFICATIONS						
Nominal Voltage	Vo	10		50	Vdc	See graph
Nominal Current	Io	0.35		1.4	A	2channel (±5 % tolerance)
Current Ripple				30	%	Output current ± 30%
Nominal Power	Po			75	W	Output wattage
Auxiliary Power Voltage			24		V	For nIO Supply Power
Auxiliary Power Current				100	mA	For nIO Supply power
Turn on delay time	Td			1.0	s	AC on 90%
Dimming SPECIFICATIONS						
Control 1			DALI			Digital
Control 1 Range			1 - 100		%	
Dimming Technique			PWM			
Galvanic Isolation			Basic / Double			Basic: DALI to primary-earth Double: DALI to secondary
Standby Power				0.5	W	Dimming Off

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Article	Symbol	Specification			Unit	Note
		Min.	Typ.	Max.		
ENVIRONMENTAL SPECIFICATIONS						
Ambient Temperature	t_a	-20		50	ºC	
Case Temperature	t_c			80	ºC	Measured at t_c point as indicated on the product label
Storage Temperature	t_s	-20		85	ºC	Cool down before operating
Relative Humidity		20		95	%	Not condensing
Surge Transient Protection	L / N			±2	kV	According to EN 61547
	LN / GND			±4	kV	
IP Rating			20		-	Suitable for indoor environment
Expected Lifetime		50,000			h	t_c = 70 ºC , full load
Dimensions	L x W x H		330 x 33 x 30		mm	
Net Weight			380		g	± 10%

2. Enclosure

3. Label

4. Connector

■ Live		LED1+	■
■ NC		LED1-	■
□ Neutral		LED2+	■
■ DALI		LED2-	■
■ DALI		24V	■
■ NC		GND	■
■ P.E			

5. Packing

Material	Quantity (Max. pcs)	Dimension (mm)		
		Length	Width	Height
Outer Paper Box	30	547 ± 5	395 ± 5	135 ± 5

- Pallet
- 1100 x 1100 x 120mm
- 1 Pallet : 32 Box (4 Box x 8 Floor)

- Box

- Box Label

⑥ 12/01/01

① DVC : SLP-DUA475D1US

② LOT : E121260001   ④ QTY : 30   ⑤ W/W : 1201

③ ASSEMBLED IN KOREA
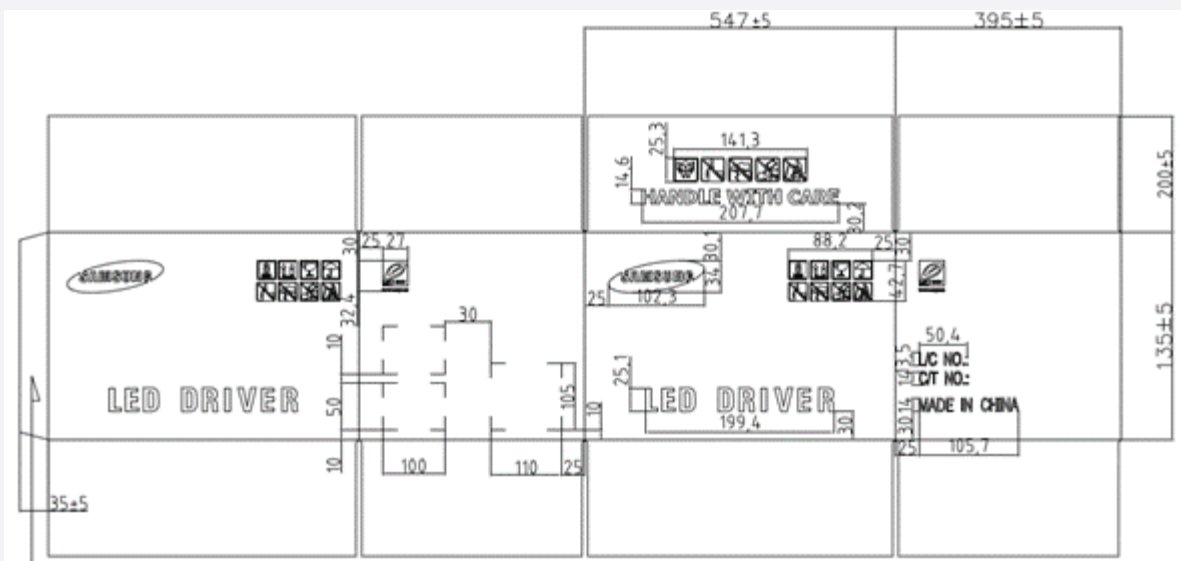
① Model Code
② Lot No.
③ Origin
④ Packing Quantity
⑤ Date of Manufacture (Weekly)
⑥ Date of Manufacture (Daily)

6. Protection

| Items	Symbol	Condition	Function
Over Temperature Protection	OTP	Vin = Rated Voltage, Temp. exceeds 150℃	Current decreases (Auto Recovery)
Short Circuit Protection	SCP	Vin = Rated Voltage, LED short	No Output (Auto Recovery)
Open Lamp Protection	OLP	Vin = Rated Voltage, LED open	Vout = 60V Clamp (Auto Recovery)
Over Voltage Protection	OVP	Vin = Rated Voltage, F/B Open or Short	Vout = 60V Clamp (Auto Recovery)

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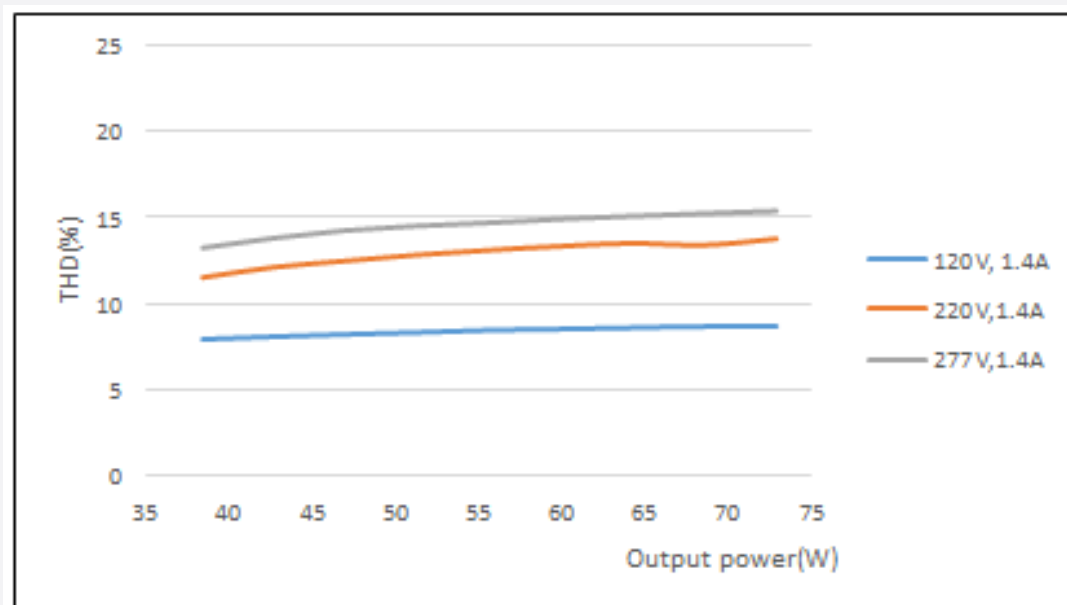# 7. Operating Window
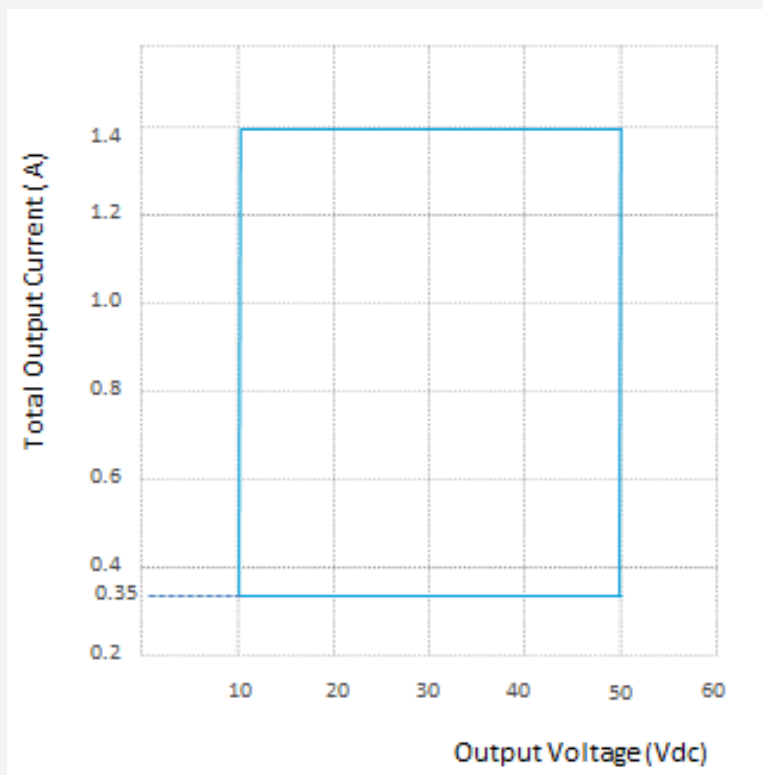
8. Performance

- Efficiency
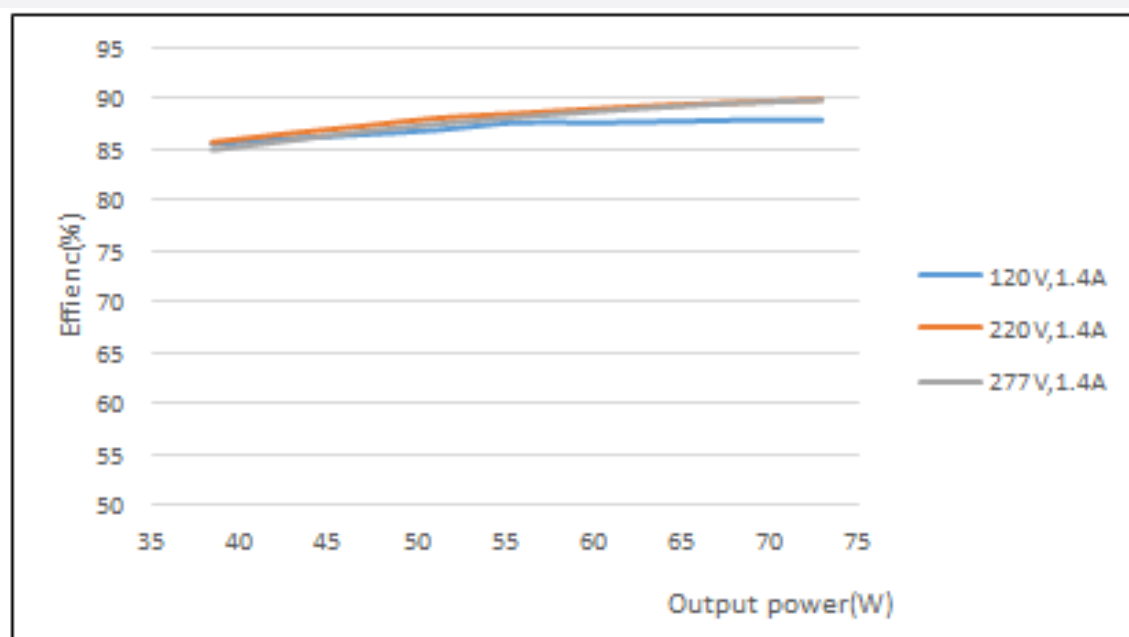
- Power Factor
-
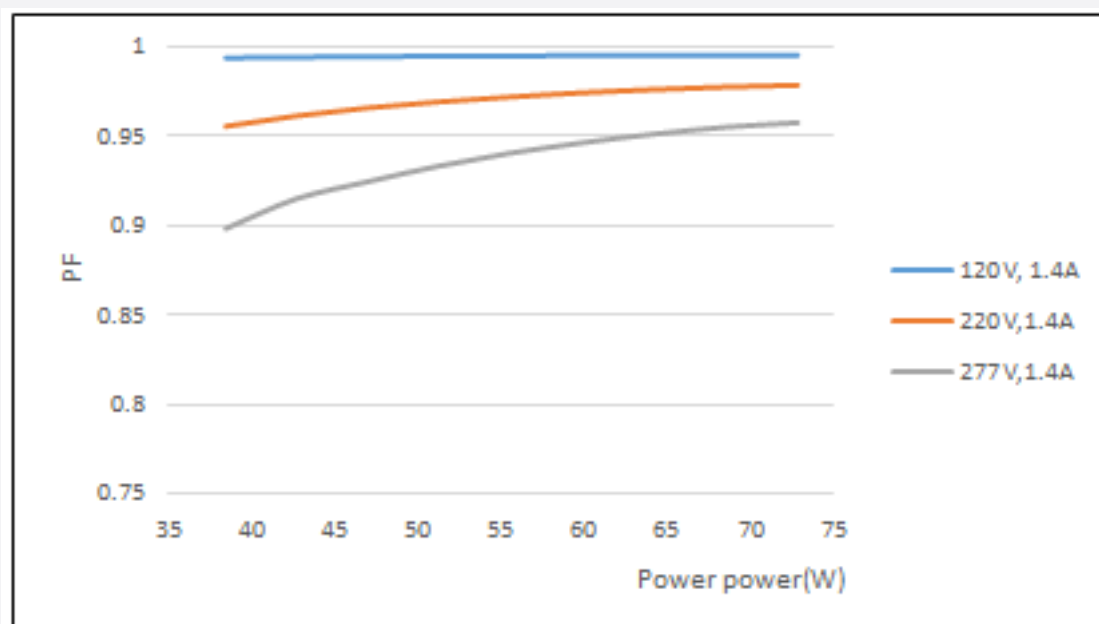
- Total Harmonic Distortion
-

9. DALI Command List

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Number	Code	Name
–	YAAA AAA0 XXXX XXXX	DIRECT ARC POWER CONTROL
0	YAAA AAA1 0000 0000	OFF
1	YAAA AAA1 0000 0001	UP
2	YAAA AAA1 0000 0010	DOWN
3	YAAA AAA1 0000 0011	STEP UP
4	YAAA AAA1 0000 0100	STEP DOWN
5	YAAA AAA1 0000 0101	RECALL MAX LEVEL
6	YAAA AAA1 0000 0110	RECALL MIN LEVEL
7	YAAA AAA1 0000 0111	STEP DOWN AND OFF
8	YAAA AAA1 0000 1000	ON AND STEP UP
9	YAAA AAA1 0000 1001	ENABLE DAPC SEQUENCE
16 – 31	YAAA AAA1 0001 XXXX	GO TO SCENE
32	YAAA AAA1 0010 0000	RESET
33	YAAA AAA1 0010 0001	STORE ACTUAL LEVEL IN THE DTR
42	YAAA AAA1 0010 1010	STORE THE DTR AS MAX LEVEL
43	YAAA AAA1 0010 1011	STORE THE DTR AS MIN LEVEL
44	YAAA AAA1 0010 1100	STORE THE DTR AS SYSTEM FAILURE LEVEL
45	YAAA AAA1 0010 1101	STORE THE DTR AS POWER ON LEVEL
46	YAAA AAA1 0010 1110	STORE THE DTR AS FADE TIME
47	YAAA AAA1 0010 1111	STORE THE DTR AS FADE RATE
64 – 79	YAAA AAA1 0100 XXXX	STORE THE DTR AS SCENE
80 – 95	YAAA AAA1 0101 XXXX	REMOVE FROM SCENE
96 – 111	YAAA AAA1 0110 XXXX	ADD TO GROUP
112 – 127	YAAA AAA1 0111 XXXX	REMOVE FROM GROUP
128	YAAA AAA1 1000 0000	STORE DTR AS SHORT ADDRESS
129	YAAA AAA1 1000 0001	ENABLE WRITE MEMORY
144	YAAA AAA1 1001 0000	QUERY STATUS
145	YAAA AAA1 1001 0001	QUERY CONTROL GEAR
146	YAAA AAA1 1001 0010	QUERY LAMP FAILURE
147	YAAA AAA1 1001 0011	QUERY LAMP POWER ON
148	YAAA AAA1 1001 0100	QUERY LIMIT ERROR
149	YAAA AAA1 1001 0101	QUERY RESET STATE
150	YAAA AAA1 1001 0110	QUERY MISSING SHORT ADDRESS
151	YAAA AAA1 1001 0111	QUERY VERSION NUMBER
152	YAAA AAA1 1001 1000	QUERY CONTENT DTR
153	YAAA AAA1 1001 1001	QUERY DEVICE TYPE
154	YAAA AAA1 1001 1010	QUERY PHYSICAL MINIMUM LEVEL
155	YAAA AAA1 1001 1011	QUERY POWER FAILURE
156	YAAA AAA1 1001 1100	QUERY CONTENT DTR1
157	YAAA AAA1 1001 1101	QUERY CONTENT DTR2
160	YAAA AAA1 1010 0000	QUERY ACTUAL LEVEL
161	YAAA AAA1 1010 0001	QUERY MAX LEVEL
162	YAAA AAA1 1010 0010	QUERY MIN LEVEL

163	YAAA AAA1 1010 0011	QUERY POWER ON LEVEL
164	YAAA AAA1 1010 0100	QUERY SYSTEM FAILURE LEVEL
165	YAAA AAA1 1010 0101	QUERY FADE TIME/FADE RATE
176 – 191	YAAA AAA1 1011 XXXX	QUERY SCENE LEVEL (SCENES 0-15)
192	YAAA AAA1 1100 0000	QUERY GROUPS 0-7
193	YAAA AAA1 1100 0001	QUERY GROUPS 8-15
194	YAAA AAA1 1100 0010	QUERY RANDOM ADDRESS (H)
195	YAAA AAA1 1100 0011	QUERY RANDOM ADDRESS (M)
196	YAAA AAA1 1100 0100	QUERY RANDOM ADDRESS (L)
197	YAAA AAA1 1100 0101	READ MEMORY LOCATION
255	YAAA AAA1 1111 1111	QUERY EXTENDED VERSION NUMBER
256	1010 0001 0000 0000	TERMINATE
257	1010 0011 XXXX XXXX	DATA TRANSFER REGISTER (DTR)
258	1010 0101 XXXX XXXX	INITIALISE
259	1010 0111 0000 0000	RANDOMISE
260	1010 1001 0000 0000	COMPARE
261	1010 1011 0000 0000	WITHDRAW
264	1011 0001 HHHH HHHH	SEARCHADDRH
265	1011 0011 MMMM MMMM	SEARCHADDRM
266	1011 0101 LLLL LLLL	SEARCHADDRL
267	1011 0111 0AAA AAA1	PROGRAM SHORT ADDRESS
268	1011 1001 0AAA AAA1	VERIFY SHORT ADDRESS
269	1011 1011 0000 0000	QUERY SHORT ADDRESS
270	1011 1101 0000 0000	PHYSICAL SELECTION
272	1100 0001 XXXX XXXX	ENABLE DEVICE TYPE X
273	1100 0011 XXXX XXXX	DATA TRANSFER REGISTER 1 (DTR1)
274	1100 0101 XXXX XXXX	DATA TRANSFER REGISTER 2 (DTR2)
275	1100 0111 XXXX XXXX	WRITE MEMORY LOCATION

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Number	Code	Name
227	YAAA AAA1 1110 0011	SELECT DIMMING CURVE
228	YAAA AAA1 1110 0100	STORE DTR AS FAST FADE TIME
237	YAAA AAA1 1110 1101	QUERY GEAR TYPE
238	YAAA AAA1 1110 1110	QUERY DIMMING CURVE
239	YAAA AAA1 1110 1111	QUERY POSSIBLE OPERATING MODES
240	YAAA AAA1 1111 0000	QUERY FEATURES
241	YAAA AAA1 1111 0001	QUERY FAILURE STATUS
252	YAAA AAA1 1111 1100	QUERY OPERATING MODE
253	YAAA AAA1 1111 1101	QUERY FAST FADE TIME
254	YAAA AAA1 1111 1110	QUERY MIN FAST FADE TIME
272	1100 0001 0000 0110	ENABLE DEVICE TYPE 6

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  o Color type : color temperature Tc

Number	Code	Name
226	YAAA AAA1 1110 0010	ACTIVATE
231	YAAA AAA1 1110 0111	SET TEMPORARY COLOUR TEMPERATURE TC
232	YAAA AAA1 1110 1000	COLOUR TEMPERATURE TC STEP COOLER
233	YAAA AAA1 1110 1001	COLOUR TEMPERATURE TC STEP WARMER
238	YAAA AAA1 1110 1110	COPY REPORT TO TEMPORARY
242	YAAA AAA1 1111 0010	STORE COLOUR TEMPERATURE TC LIMIT
243	YAAA AAA1 1111 0011	STORE GEAR FEATURES/STATUS
247	YAAA AAA1 1111 0111	QUERY GEAR FEATURES/STATUS
248	YAAA AAA1 1111 1000	QUERY COLOUR STATUS
249	YAAA AAA1 1111 1001	QUERY COLOUR TYPE FEATURES
250	YAAA AAA1 1111 1010	QUERY COLOUR VALUE
255	YAAA AAA1 1111 1111	QUERY EXTENDED VERSION NUMBER

10. Precaution

- To prevent the LED Driver from any defect, please handle and store it with care

  - Do not drop or give shock
  - Do not store in very humid location or at extreme temperature
  - Do not open or disassemble the product

- Static electricity or surge voltage may damage the components inside LED Driver, as such please observe proper anti-electrostatic working process

  - People handing the Driver should be well grounded (e.g. using ESD wrist band) and wear anti-static working clothes and gloves
  - All related devices and instruments in the production line should be well grounded (e.g. working table, measuring equipment, assembly jigs)

- Observe the correct polarity of output terminal

- Avoid input voltage exceeds the maximum rating, which will cause damage to the circuit and result in malfunction.

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Legal and additional information.

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