

## AC LED Light Engine Specification

Model:RL-HMD70A2801H016-840TB

RL-HMD100A2802H016-840TB

RL-HMD180A2802H023-840TB

RL-LMD70A2201N016-930FB

RL-LMD100A2202N016-930FB

RL-LMD180A2202N023-930FB

## Key Features

- ◇ High total efficiency up to 120lm/W
- ◇ Various CCT available: 2700/3000/3500/4000/5000/5700/6500K
- ◇ CRI:80/90/95 options
- ◇ Macadam 3/5 steps color bin
- ◇ Solutions for Down light/Ceiling light
- ◇ AC line voltage 120V/230V input directly
- ◇ Power factor higher than 0.95
- ◇ Low THDI:<18%
- ◇ TRIAC dimmable

## General application



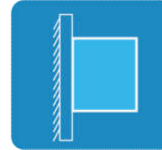
Down light



Ceiling light



Pendant light



Wall light

## Applied standards



- ◇ EN 62321
- ◇ EMC: EN 55015 EN 61547 EN 61000-3-2 EN 61000-3-3
- ◇ EMI: EN55015 EN61000-3-2 EN61000-3-3
- ◇ EMS: EN61547
- ◇ EMF: EN62493
- ◇ LVD: EN62471 EN62031

## General information

P/N	Size	Input	Power	PF	Flux	Efficiency	CCT	CRI	Dimming
	mm	Vac	W	-	Lm	Lm/W	K	-	-
RL-HMD70A2801H016-840TB	Ø70	230	16	0.95	1680	105	4000	80	TRIAC
RL-HMD100A2802H016-840TB	Ø100	230	16	0.95	1840	115	4000	80	TRIAC
RL-HMD180A2802H023-840TB	Ø180	230	23	0.95	2400	105	4000	80	TRIAC
RL-LMD70A2201N016-930FB	Ø70	120	16	0.95	1360	85	3000	90	TRIAC
RL-LMD100A2202N016-930FB	Ø100	120	16	0.95	1440	90	3000	90	TRIAC
RL-LMD180A2202N023-930FB	Ø180	120	23	0.95	1955	85	3000	90	TRIAC

**Note:** 1-Variou CCT available ( 2700-6500K ); RL-XXXXXXXXXXXXXXXX-840X ( 8-80CRI;40-4000K CCT )

2-Typical Optical-electronic parameters above @ Ta=25°C

## Selection guide Example: RL-LMD70A2201H016-xxT

P/N	Size	Input	Power	PF	Flux	Efficiency	CCT	CRI	Dimming
	mm	Vac	W	-	Lm	Lm/W	K	-	-
RL-LMD70A2201N016-827FB	Ø70	120	16	>0.95	1360	85	2700	80	TRIAC
RL-LMD70A2201N016-830FB					1440	90	3000		
RL-LMD70A2201N016-835FB					1400	90	3500		
RL-LMD70A2201N016-840FB	Ø70	120	16	>0.95	1520	95	4000	90	TRIAC
RL-LMD70A2201N016-850FB					1520	95	5000		
RL-LMD70A2201N016-857FB					1600	100	5700		
RL-LMD70A2201N016-865FB					1600	100	6500		
RL-LMD70A2201N016-930FB					1200	75	2700		
RL-LMD70A2201N016-927FB					1200	75	3000		
RL-LMD70A2201N016-935FB	Ø70	120	16	>0.95	1280	80	3500	95	TRIAC
RL-LMD70A2201N016-940FB					1360	85	4000		
RL-LMD70A2201N016-950FB					1360	85	5000		
RL-LMD70A2201N016-957FB					1440	90	5700		
RL-LMD70A2201N016-U27FB					1040	65	2700		
RL-LMD70A2201N016-U30FB					1120	70	3000		
RL-LMD70A2201N016-U35FB	Ø70	120	16	>0.95	1120	70	3500	95	TRIAC
RL-LMD70A2201N016-U40FB					1200	75	4000		
RL-LMD70A2201N016-U50FB					1200	75	5000		
RL-LMD70A2201N016-U57FB					1280	80	5700		

## Part Number & Explanation

RL	-	L	M	D	70	A	22	01	N	016	-	9	30	T
1		2	3	4	5	6	7	8	9	10		11	12	13
1		Relight												
2		H: AC230V L: AC120V C: constant current V: constant voltage												
3		M: Module series												
4		D: Round R: Ring												
5		Diameter												
6		A: Aluminum P: CEM3 F: FR4 C: Copper (PCB material)												
7		Circuit												
8		Circuit												
9		Efficiency level ( H: high N: normal L: low)												
10		Power; Watt												
11		CRI (8:80;9:90;U95;V:98)												
12		CCT; 27:2700K ...												
13		Dimming function (N:non-dimmable; T:TRIAC ; A:0-10V ; P:PWM ; W:Wireless; TB: TRIAC balance; FB: Full balance)												

## Characteristics

Input	100-130Vac /200-240Vac
Frequency	50/60Hz
Rated power	Typical power (±10% tolerance)
PF	>0.95
Protection	IP20
Surge level	2.5KV
Hi-pot	1.5KVac
Storage temperature	-30-85°C
Operation temperature	-30-80°C (Ts ofled components)
Beam Angle	120 deg
Flicker index	<30% (RL-LMDxxxxxxx series only , according to North American T24 requirement)

**Mechanical dimension** (Unit: mm)

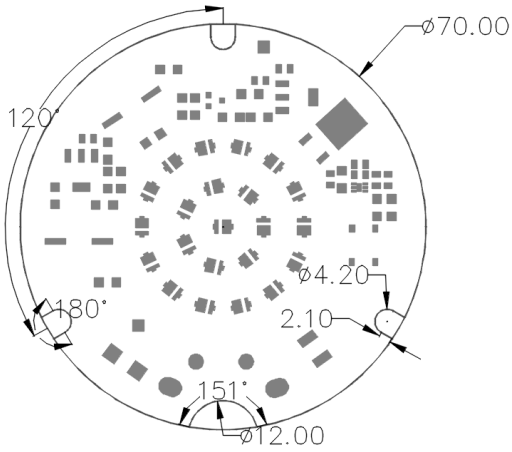


Fig1: RL-XMD070A series outline

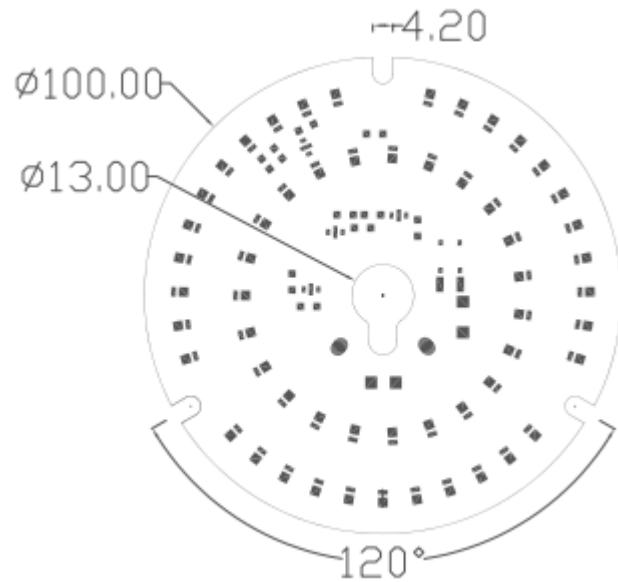


Fig2: RL-XMD100A series outline

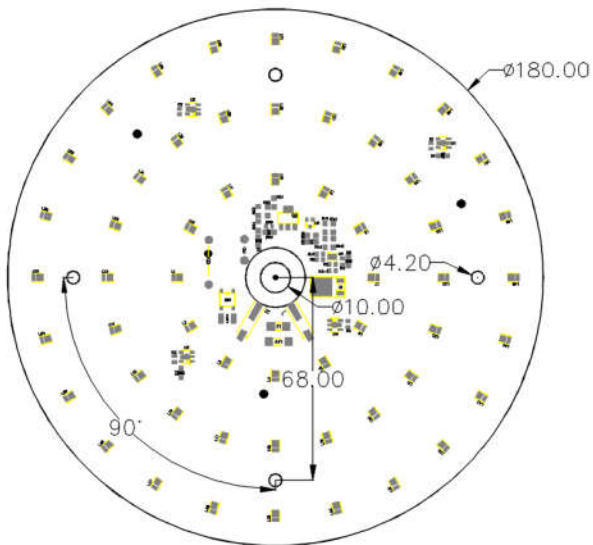


Fig3: RL-XMD180A series outline

## EMC report

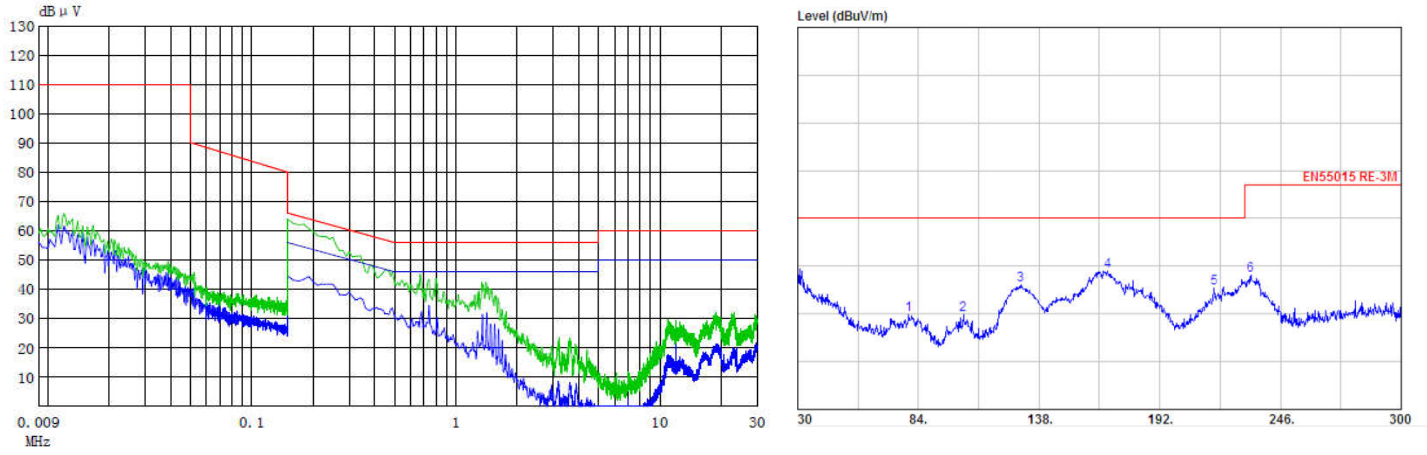


Fig4: RL-LMD series

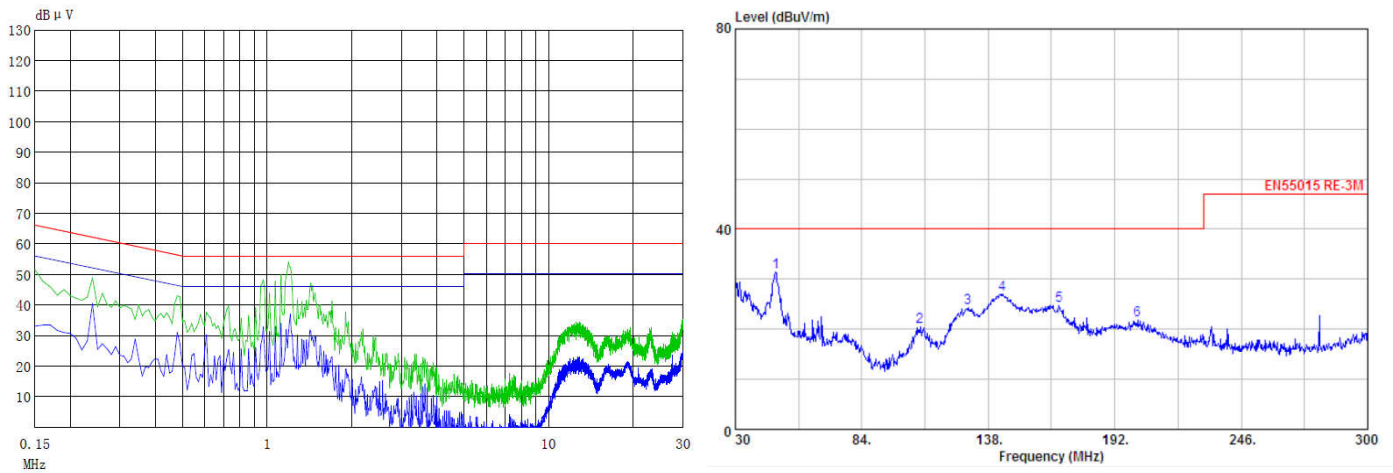


Fig5: RL-HMD series

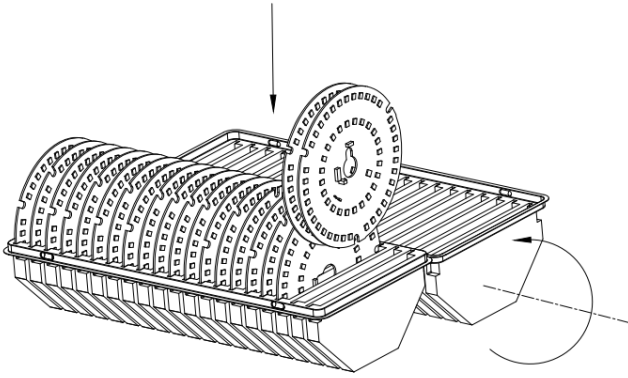
## Dimming range

P/N	Dimmer & Dimming level			Visible Flickering
	LUTRON CTCC-153P	CLIPSAL KB31RD400	CLIPSAL 630W	
RL-HMD70A2801H016-840TB		2.5%	5.1%	NO
RL-HMD100A2802H016-840TB		2.4%	5%	NO
RL-HMD180A2802H023-840TB		2.5%	5.2%	NO
RL-LMD70A2201N016-930FB	2.4%			NO
RL-LMD100A2202N016-930FB	2%			NO
RL-LMD180A2202N023-930FB	2%			NO

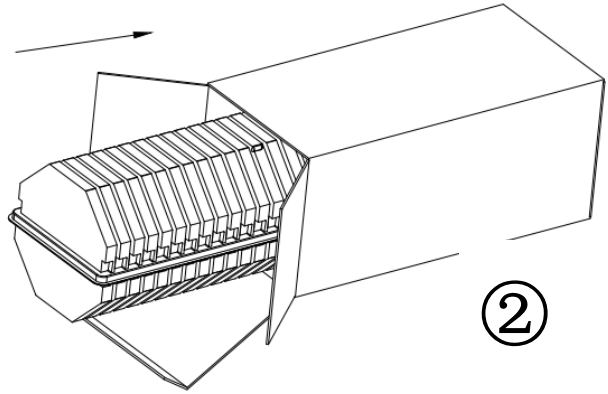
## Line regulation

P/N	Voltage-Vac Vs Power-Watt							
	108Vac	120Vac	132Vac	144Vac	207Vac	230Vac	253Vac	264Vac
RL-HMD70A2801H016-840TB					14.6	15.4	15.3	14.5
RL-HMD100A2802H016-840TB					16	16.8	16.6	15.9
RL-HMD180A2802H023-840TB					21.9	23.2	21.8	23.2
RL-LMD70A2201N016-930FB	14.2	15.9	16.5	16				
RL-LMD100A2202N016-930FB	13.8	15.8	16.5	16.2				
RL-LMD180A2202N023-930FB	21.9	23	22.9	21.8				

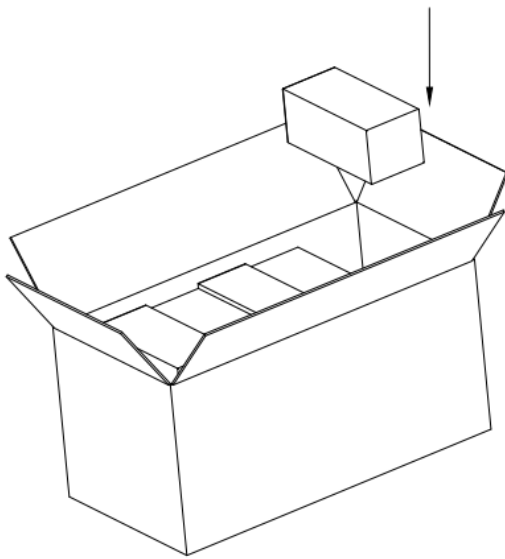
## Package



①



②



③

		Per white box	Per carton
Modules	----pcs	20	300
Weight	----Kg	0.83	12.5
Dimension	----mm	255*118*108	600*270*365



## Safety Information

1. The LED module and all its components shall not be subjected to mechanical stress
2. Correct electrical polarity, otherwise module may be damaged
3. Ensure the power supply is suitable for the total load.
4. Electrostatic Discharge (ESD) precautions shall be incorporated when handling or installing the module.
5. Installation of LED modules shall refer to all applicable electrical and safety standards.
6. Suitable for luminaire of protection class 1, grounding is mandatory to comply with safety standards
7. The AC light engine needs to be mounted to a heat sink with a thermal interface material between them
8. It is better to use the AC led module with safety cover
9. Modules may be hot to touch. Use caution when handling.

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