

## PRIMO – PR75

# Color-Adjustable PAR56/64 Retrofit LED Module

The PR75 is the next generation version of the PRIMO LED module designed for both gamut color or high-quality RGLBW blended beam white output that is remarkably bright and efficient.

The premium quality **Luxapel light engine** uses an array of 44 high-bright LEDs mixed with a unique 6-channel LED driver to produce a complete range of colors using an RGBW DMX controller or preset operating modes.

This proprietary design has no flicker and smooth high-resolution dimming down to 0.01% for broadcast quality lighting situations. For simple inclusion in existing lighting systems the PR75 comes with wired DMX512 interface for easy dimming with 1, 2, 4, or 6 DMX channels.

For ease of installation the PR75 can be upgraded with an optional wireless DMX receiver to avoid the need to run control wiring. For simplicity these lights use a DIP switch for setting unit address. For wireless set-up the unit can be upgraded with Bluetooth control for phone app mode setting. With more than 8,000 full-white lumens plus a uniform and circular beam the performance of PR75 is suitable for replacing 1,000W incandescent bulbs.



full

## KEY FEATURES

- Low profile enclosure for easy install into PAR64 or PAR56 cans or ceiling fixtures.
- High quality color rendering >95 CRI with uniformly blended 25-degree beam.
- No flicker, calibrated white CCT and smooth dimming to 0.01%
- Wireless or wired control for DMX512 systems.
- Consumes only 95W of power to produce >8,000 lumens of white light by blending RGLBW LEDs.
- Available in White Only LED configuration with fixed CCT able to produce up to 19,000 lumens.

## OPTICAL

- 8,000 lumens and 15,000 LUX at 2 m.
- 20-degree narrow spot with uniform circular shape. Adjustable beam using interchangeable diffusers.
- Rf Fidelity = 89, Rg Gamut = 107. CRI >95. Customized white CCT (tunable) available on demand.
- A variety of user changeable micro-lens diffuser sheets are available to widen the beam.

## CONTROL OPTIONS

- PR75 – WXA\*, embedded W-DMX receiver for wireless DMX control, w/DIP switch to set address and mode.
- PR75 – HXA\*, embedded W-DMX receiver for wireless DMX control, with BLE receiver to operate with Bluetooth and set DMX address.
- All models include a BLE socket for configuration using mobile app.
- Standalone operation capability for preset color modes and sequences using DIP switch presets
- All models include RJ45 connector for wired DMX control. Convert to XLR with adaptor cables.
- \* Requires W-DMX transmitter (TRW1) for operation with W-DMX or CRMX configuration.

## ELECTRICAL

- Universal power supply with PFC > 0.90 with UL/CSA/CE rated Class 2 certification.
- Very high efficacy LED system consuming 150W maximum
- Designed for safety and reliability with more than 60K hours of L70 LED life and IP20 rating

## MECHANICAL

- Durable aluminum and polymer frame w/ heat exchanger and low-noise fan for cool long-life operation.
- User configurable for installation into either PAR64 or PAR56 fixtures.
- Back plate configured for: DIP switch, RJ45 connectors, power connector, fan, wireless antenna

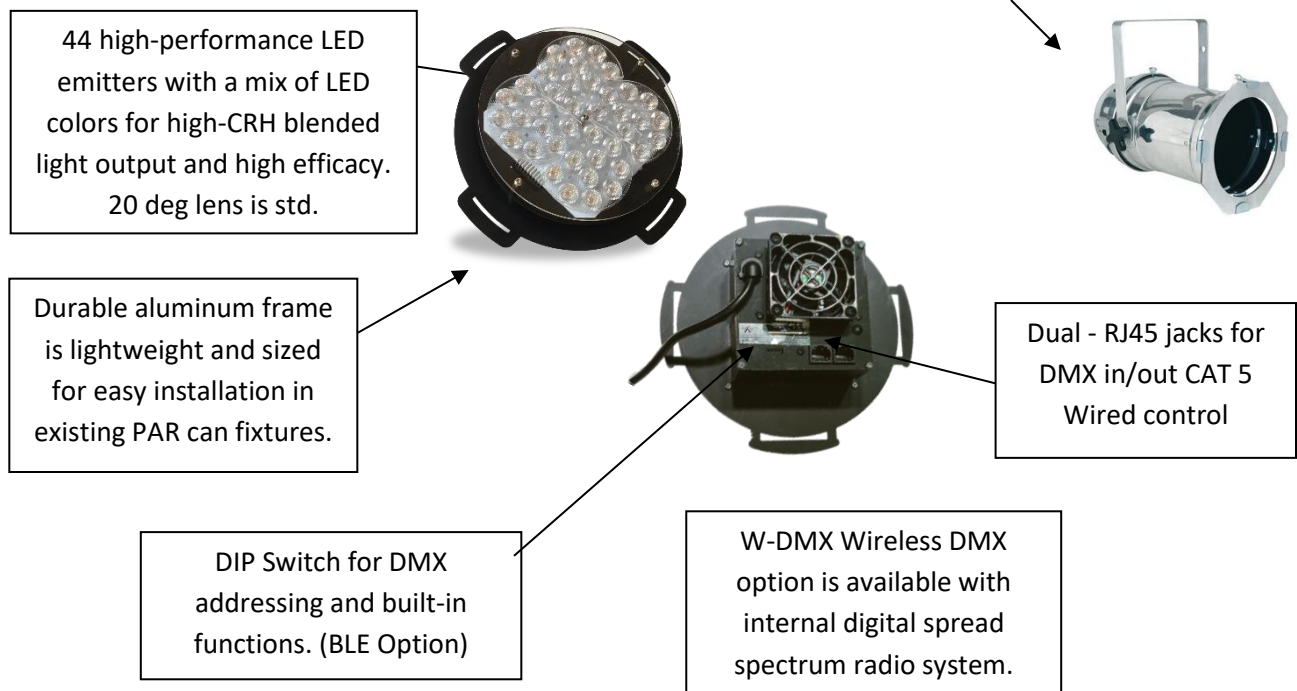
## SPECIFICATIONS

<b>MECHANICAL / ENVIRONMENTAL</b>	
Cooling System	Thermistor controlled active convection
Housing Material	Aluminum and polycarbonate
Lens Material	AG Coated Polymer
Size (Dia. X Length)	8.0 in. (PAR64) or 7.0 in. (PAR56) X 3.5 in. deep
Weight	2.9 lb.
Operating Temperature Range	-10°C - 40°C (105°F)
<b>ELECTRICAL</b>	
Max Power Consumption (Watts)	120 W
Current max (A)	0.9A @115V
Voltage (operating range)	85 - 264 VAC, 60/50Hz / 100 – 370 VDC
Remote Communication methods	1-channel DMX512 or wireless DMX control

Note: Full data available on request

## DIMENSIONS

8" Dia x 3.5" deep for PAR64 retrofit – flange is easily modified to fit into 7" PAR56 cans.



Call: 833.LUX.LITE or email: [info@luxapel.com](mailto:info@luxapel.com) for more info or to get a quote.

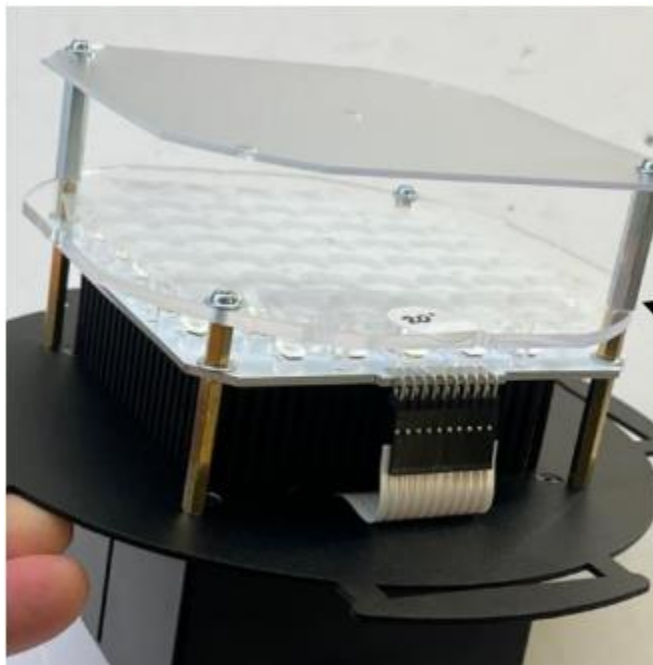
## PR75 DIFFUSER OPTIONS

An added diffuser will widen the standard beam angle of the fixture and will help make a smooth and well-blended beam. We offer 5-degree (very light) and 30-degree diffusers, for Very Narrow and Very Wide applications. Contact Luxapel if you require a diffuser kit and specify the desired beam width.

The beam angle can be changed by the user in three ways:

1. The 'easy' way to adjust the beam angle is to add a user supplied plastic sheet diffuser (such as Lee Filters or Rosco might offer) into the gel frame of the instrument enclosure. The user needs to take care to ensure there is adequate air flow! Do not block the entire PAR can cylinder opening.
2. For a high-quality beam adjustment we can provide option diffuser sheets made from a micro-lens polymer material with very low transmission loss. These sheets are inserted on top of the LED lens array inside the light fixture. For improved beam blending we are offer a 'Diffuser Standoff Kit', which allows user to install long hex standoff spacers into 2 of the corners, then a plate diffuser can be screwed down into the corner standoff screw threads – see illustration below. This option has several advantages if the venue requires the wider beam angle, such as for House Lights.
3. The most 'intense' is to remove the front cover plastic and switch the lens arrays to a different type. The lens array is available in 10, 20, 30 and 45 degree variations. When ordering a fixture the desired lens angle can be specified if needed.

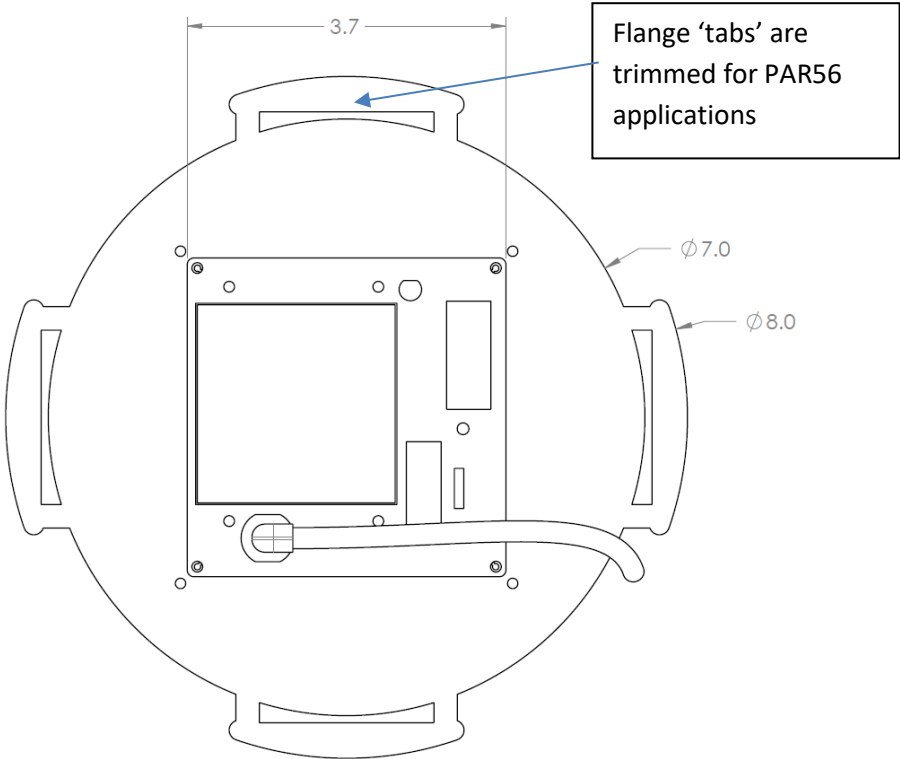
### **Diffuser Standoff Kit**



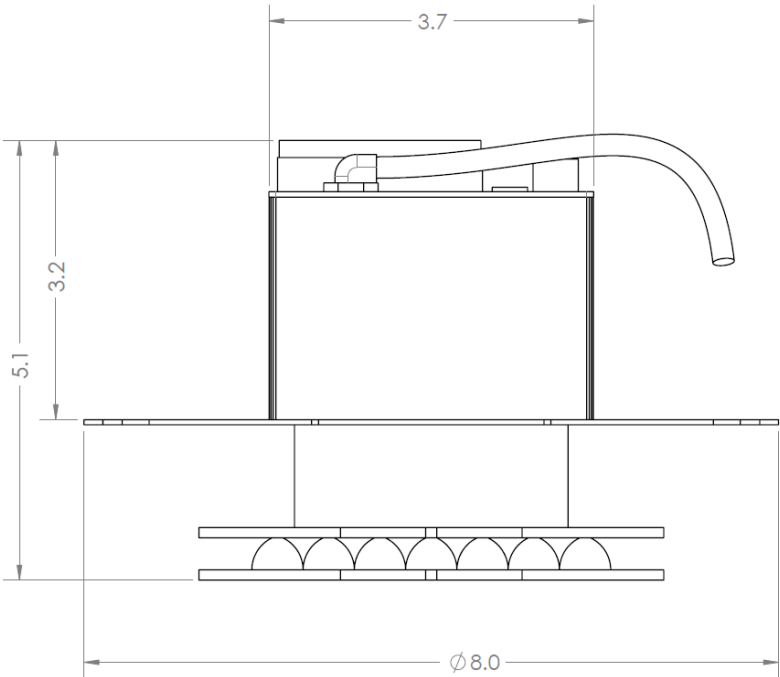
Several materials are suitable for widening the beam.

Remove screws from 2 corners, add standoffs into those locations. Then add the diffuser material on top and screw down

DIMENSIONAL DRAWING:



SIDE VIEW:



## CONNECTING DMX512:

The PRIMO products can be connected to a DMX512 control system by either wired or wireless connection depending on the model being used.

Wired version receives DMX512 via an RJ-45 connector as detailed in the DMX512 standard and include two RJ-45 connectors that are wired identically. Either may be used as the input. The other jack may be used to daisy-chain the DMX512 wiring to additional fixtures. Adaptors are commercially available to convert the DMX512 5-pin XLR cable to an RJ45 connector on CAT5 cable.

The pin-out of the RJ-45 is as follows:

Pin	Wire Color	Signal
1	White w/ Orange	Data 1 '+'
2	Orange	Data 1 '-'
3	White w/ Green	Data 2 '+' (passed thru only)
4	Blue	Unused
5	White w/ Blue	Unused
6	Green	Data 2 '-' (passed thru only)
7	White w/ Brown	Signal Common 1
8	Brown	Signal Common 2

**NOTE:** The PR does not include electrical termination of the DMX512 line. In many instances, DMX512 works perfectly well without electrical termination of the cable. If termination is found to be necessary, an external termination plug must be used.

**Warning:** Accidental connection to non-DMX512 equipment (e.g., an Ethernet Hub at a patch bay) may result in damage to equipment. Pins 4 and 5 may carry voltages outside the EIA- 485 range in telecom applications (e.g., telephone ringing). Pins 4 and 7 may carry voltages outside the EIA-485 range in other applications (e.g., some manufacturers whose distributed DMX512 buffering products require low voltage DC power may use these wires). **Plugging into non-DMX systems could cause serious damage.**

The wireless versions (with an optional W-DMX embedded comms module) receives a DMX512 signal via a spread-spectrum radio transmission from a compatible wireless W-DMX transmitter. The transmitter is connected to a DMX console or computer and then synchronized with the luminaire for a secure wireless connection that works the same way as a wired DMX system. Note that the wireless models also include an RJ-45 connector that can be used to interface with additional wired DMX products.

## DMX512 Address Settings:

PR75 occupies 4 slots on the DMX512 network, starting at the address shown in this chart. The dip switch sets the zero-based unit number.

ADDRESS	DIP SETTING	ADDRESS	DIP SETTING	ADDRESS	DIP SETTING	ADDRESS	DIP SETTING
1	1000 0000 00	65	1000 0010 00	129	1000 0001 00	193	1000 0011 00
2	0100 0000 00	66	0100 0010 00	130	0100 0001 00	194	0100 0011 00
3	1100 0000 00	67	1100 0010 00	131	1100 0001 00	195	1100 0011 00
4	0010 0000 00	68	0010 0010 00	132	0010 0001 00	196	0010 0011 00
5	1010 0000 00	69	1010 0010 00	133	1010 0001 00	197	1010 0011 00
6	0110 0000 00	70	0110 0010 00	134	0110 0001 00	198	0110 0011 00
7	1110 0000 00	71	1110 0010 00	135	1110 0001 00	199	1110 0011 00
8	0001 0000 00	72	0001 0010 00	136	0001 0001 00	200	0001 0011 00
9	1001 0000 00	73	1001 0010 00	137	1001 0001 00	201	1001 0011 00
10	0101 0000 00	74	0101 0010 00	138	0101 0001 00	202	0101 0011 00
11	1101 0000 00	75	1101 0010 00	139	1101 0001 00	203	1101 0011 00
12	0011 0000 00	76	0011 0010 00	140	0011 0001 00	204	0011 0011 00
13	1011 0000 00	77	1011 0010 00	141	1011 0001 00	205	1011 0011 00
14	0111 0000 00	78	0111 0010 00	142	0111 0001 00	206	0111 0011 00
15	1111 0000 00	79	1111 0010 00	143	1111 0001 00	207	1111 0011 00
16	0000 1000 00	80	0000 1010 00	144	0000 1001 00	208	0000 1011 00
17	1000 1000 00	81	1000 1010 00	145	1000 1001 00	209	1000 1011 00
18	0100 1000 00	82	0100 1010 00	146	0100 1001 00	210	0100 1011 00
19	1100 1000 00	83	1100 1010 00	147	1100 1001 00	211	1100 1011 00
20	0010 1000 00	84	0010 1010 00	148	0010 1001 00	212	0010 1011 00
21	1010 1000 00	85	1010 1010 00	149	1010 1001 00	213	1010 1011 00
22	0110 1000 00	86	0110 1010 00	150	0110 1001 00	214	0110 1011 00
23	1110 1000 00	87	1110 1010 00	151	1110 1001 00	215	1110 1011 00
24	0001 1000 00	88	0001 1010 00	152	0001 1001 00	216	0001 1011 00
25	1001 1000 00	89	1001 1010 00	153	1001 1001 00	217	1001 1011 00
26	0101 1000 00	90	0101 1010 00	154	0101 1001 00	218	0101 1011 00
27	1101 1000 00	91	1101 1010 00	155	1101 1001 00	219	1101 1011 00
28	0011 1000 00	92	0011 1010 00	156	0011 1001 00	220	0011 1011 00
29	1011 1000 00	93	1011 1010 00	157	1011 1001 00	221	1011 1011 00
30	0111 1000 00	94	0111 1010 00	158	0111 1001 00	222	0111 1011 00
31	1111 1000 00	95	1111 1010 00	159	1111 1001 00	223	1111 1011 00
32	0000 0100 00	96	0000 0110 00	160	0000 0101 00	224	0000 0111 00
33	1000 0100 00	97	1000 0110 00	161	1000 0101 00	225	1000 0111 00
34	0100 0100 00	98	0100 0110 00	162	0100 0101 00	226	0100 0111 00
35	1100 0100 00	99	1100 0110 00	163	1100 0101 00	227	1100 0111 00
36	0010 0100 00	100	0010 0110 00	164	0010 0101 00	228	0010 0111 00
37	1010 0100 00	101	1010 0110 00	165	1010 0101 00	229	1010 0111 00
38	0110 0100 00	102	0110 0110 00	166	0110 0101 00	230	0110 0111 00
39	1110 0100 00	103	1110 0110 00	167	1110 0101 00	231	1110 0111 00
40	0001 0100 00	104	0001 0110 00	168	0001 0101 00	232	0001 0111 00
41	1001 0100 00	105	1001 0110 00	169	1001 0101 00	233	1001 0111 00
42	0101 0100 00	106	0101 0110 00	170	0101 0101 00	234	0101 0111 00
43	1101 0100 00	107	1101 0110 00	171	1101 0101 00	235	1101 0111 00
44	0011 0100 00	108	0011 0110 00	172	0011 0101 00	236	0011 0111 00
45	1011 0100 00	109	1011 0110 00	173	1011 0101 00	237	1011 0111 00
46	0111 0100 00	110	0111 0110 00	174	0111 0101 00	238	0111 0111 00
47	1111 0100 00	111	1111 0110 00	175	1111 0101 00	239	1111 0111 00
48	0000 1100 00	112	0000 1110 00	176	0000 1101 00	240	0000 1111 00
49	1000 1100 00	113	1000 1110 00	177	1000 1101 00	241	1000 1111 00
50	0100 1100 00	114	0100 1110 00	178	0100 1101 00	242	0100 1111 00
51	1100 1100 00	115	1100 1110 00	179	1100 1101 00	243	1100 1111 00
52	0010 1100 00	116	0010 1110 00	180	0010 1101 00	244	0010 1111 00
53	1010 1100 00	117	1010 1110 00	181	1010 1101 00	245	1010 1111 00
54	0110 1100 00	118	0110 1110 00	182	0110 1101 00	246	0110 1111 00
55	1110 1100 00	119	1110 1110 00	183	1110 1101 00	247	1110 1111 00
56	0001 1100 00	120	0001 1110 00	184	0001 1101 00	248	0001 1111 00
57	1001 1100 00	121	1001 1110 00	185	1001 1101 00	249	1001 1111 00
58	0101 1100 00	122	0101 1110 00	186	0101 1101 00	250	0101 1111 00
59	1101 1100 00	123	1101 1110 00	187	1101 1101 00	251	1101 1111 00
60	0011 1100 00	124	0011 1110 00	188	0011 1101 00	252	0011 1111 00
61	1011 1100 00	125	1011 1110 00	189	1011 1101 00	253	1011 1111 00
62	0111 1100 00	126	0111 1110 00	190	0111 1101 00	254	0111 1111 00
63	1111 1100 00	127	1111 1110 00	191	1111 1101 00	255	1111 1111 00
64	0000 0010 00	128	0000 0001 00	192	0000 0011 00	256	0000 0000 10

## DMX ADDRESS SETTINGS:

1 = up    0 = down

EXAMPLE: address 141

1011 0001 00



**1 2 4 8** 16 32 64 128 256  
 1    + 4 + 8                    + 128 = 141

# LUXAPEL LLC

# PRODUCT GUIDE

ADDRESS	DIP SETTING	ADDRESS	DIP SETTING	ADDRESS	DIP SETTING	ADDRESS	DIP SETTING
257	1000 0000 10	321	1000 0010 10	385	1000 0001 10	449	1000 0011 10
258	0100 0000 10	322	0100 0010 10	386	0100 0001 10	450	0100 0011 10
259	1100 0000 10	323	1100 0010 10	387	1100 0001 10	451	1100 0011 10
260	0010 0000 10	324	0010 0010 10	388	0010 0001 10	452	0010 0011 10
261	1010 0000 10	325	1010 0010 10	389	1010 0001 10	453	1010 0011 10
262	0110 0000 10	326	0110 0010 10	390	0110 0001 10	454	0110 0011 10
263	1110 0000 10	327	1110 0010 10	391	1110 0001 10	455	1110 0011 10
264	0001 0000 10	328	0001 0010 10	392	0001 0001 10	456	0001 0011 10
265	1001 0000 10	329	1001 0010 10	393	1001 0001 10	457	1001 0011 10
266	0101 0000 10	330	0101 0010 10	394	0101 0001 10	458	0101 0011 10
267	1101 0000 10	331	1101 0010 10	395	1101 0001 10	459	1101 0011 10
268	0011 0000 10	332	0011 0010 10	396	0011 0001 10	460	0011 0011 10
269	1011 0000 10	333	1011 0010 10	397	1011 0001 10	461	1011 0011 10
270	0111 0000 10	334	0111 0010 10	398	0111 0001 10	462	0111 0011 10
271	1111 0000 10	335	1111 0010 10	399	1111 0001 10	463	1111 0011 10
272	0000 1000 10	336	0000 1010 10	400	0000 1001 10	464	0000 1011 10
273	1000 1000 10	337	1000 1010 10	401	1000 1001 10	465	1000 1011 10
274	0100 1000 10	338	0100 1010 10	402	0100 1001 10	466	0100 1011 10
275	1100 1000 10	339	1100 1010 10	403	1100 1001 10	467	1100 1011 10
276	0010 1000 10	340	0010 1010 10	404	0010 1001 10	468	0010 1011 10
277	1010 1000 10	341	1010 1010 10	405	1010 1001 10	469	1010 1011 10
278	0110 1000 10	342	0110 1010 10	406	0110 1001 10	470	0110 1011 10
279	1110 1000 10	343	1110 1010 10	407	1110 1001 10	471	1110 1011 10
280	0001 1000 10	344	0001 1010 10	408	0001 1001 10	472	0001 1011 10
281	1001 1000 10	345	1001 1010 10	409	1001 1001 10	473	1001 1011 10
282	0101 1000 10	346	0101 1010 10	410	0101 1001 10	474	0101 1011 10
283	1101 1000 10	347	1101 1010 10	411	1101 1001 10	475	1101 1011 10
284	0011 1000 10	348	0011 1010 10	412	0011 1001 10	476	0011 1011 10
285	1011 1000 10	349	1011 1010 10	413	1011 1001 10	477	1011 1011 10
286	0111 1000 10	350	0111 1010 10	414	0111 1001 10	478	0111 1011 10
287	1111 1000 10	351	1111 1010 10	415	1111 1001 10	479	1111 1011 10
288	0000 0100 10	352	0000 0110 10	416	0000 0101 10	480	0000 0111 10
289	1000 0100 10	353	1000 0110 10	417	1000 0101 10	481	1000 0111 10
290	0100 0100 10	354	0100 0110 10	418	0100 0101 10	482	0100 0111 10
291	1100 0100 10	355	1100 0110 10	419	1100 0101 10	483	1100 0111 10
292	0010 0100 10	356	0010 0110 10	420	0010 0101 10	484	0010 0111 10
293	1010 0100 10	357	1010 0110 10	421	1010 0101 10	485	1010 0111 10
294	0110 0100 10	358	0110 0110 10	422	0110 0101 10	486	0110 0111 10
295	1110 0100 10	359	1110 0110 10	423	1110 0101 10	487	1110 0111 10
296	0001 0100 10	360	0001 0110 10	424	0001 0101 10	488	0001 0111 10
297	1001 0100 10	361	1001 0110 10	425	1001 0101 10	489	1001 0111 10
298	0101 0100 10	362	0101 0110 10	426	0101 0101 10	490	0101 0111 10
299	1101 0100 10	363	1101 0110 10	427	1101 0101 10	491	1101 0111 10
300	0011 0100 10	364	0011 0110 10	428	0011 0101 10	492	0011 0111 10
301	1011 0100 10	365	1011 0110 10	429	1011 0101 10	493	1011 0111 10
302	0111 0100 10	366	0111 0110 10	430	0111 0101 10	494	0111 0111 10
303	1111 0100 10	367	1111 0110 10	431	1111 0101 10	495	1111 0111 10
304	0000 1100 10	368	0000 1110 10	432	0000 1101 10	496	0000 1111 10
305	1000 1100 10	369	1000 1110 10	433	1000 1101 10	497	1000 1111 10
306	0100 1100 10	370	0100 1110 10	434	0100 1101 10	498	0100 1111 10
307	1100 1100 10	371	1100 1110 10	435	1100 1101 10	499	1100 1111 10
308	0010 1100 10	372	0010 1110 10	436	0010 1101 10	500	0010 1111 10
309	1010 1100 10	373	1010 1110 10	437	1010 1101 10	501	1010 1111 10
310	0110 1100 10	374	0110 1110 10	438	0110 1101 10	502	0110 1111 10
311	1110 1100 10	375	1110 1110 10	439	1110 1101 10	503	1110 1111 10
312	0001 1100 10	376	0001 1110 10	440	0001 1101 10	504	0001 1111 10
313	1001 1100 10	377	1001 1110 10	441	1001 1101 10	505	1001 1111 10
314	0101 1100 10	378	0101 1110 10	442	0101 1101 10	506	0101 1111 10
315	1101 1100 10	379	1101 1110 10	443	1101 1101 10	507	1101 1111 10
316	0011 1100 10	380	0011 1110 10	444	0011 1101 10	508	0011 1111 10
317	1011 1100 10	381	1011 1110 10	445	1011 1101 10	509	1011 1111 10
318	0111 1100 10	382	0111 1110 10	446	0111 1101 10	510	0111 1111 10
319	1111 1100 10	383	1111 1110 10	447	1111 1101 10	511	1111 1111 10
320	0000 0010 10	384	0000 0001 10	448	0000 0011 10	512	DISALLOWED*

## Special Functions accessed by DIP Switch:

With rightmost switches set to 1001, the mixed colors can be set without using DMX control:

<b>Red</b>	<b>1000 0010 01</b>	
<b>Green</b>	<b>0100 0010 01</b>	
<b>Blue</b>	<b>0010 0010 01</b>	
<b>White</b>	<b>0001 0010 01</b>	
<b>Yellow</b>	<b>1100 0010 01</b>	
<b>Magenta</b>	<b>1010 0010 01</b>	
<b>Cyan</b>	<b>0110 0010 01</b>	
<b>Full (RGBW)</b>	<b>1111 0010 01</b>	<b>~ 4500K balanced, highest light output</b>
<b>RGBL</b>	<b>1110 0010 01</b>	<b>calibrated to 6500K, balanced red, green, blue and lime</b>

With rightmost switches set to 0001, the various blended WHITE CCTs are accessed:

<b>CCT = 2400K</b>	<b>1000 0000 01</b>	<b>these white settings are not guaranteed</b>
<b>CCT = 6500K</b>	<b>1101 0010 01</b>	<b>(uncalibrated)</b>

With rightmost switches set to 1111, each emitter can be turned on/off using switches 1 through 6:

<b>Red</b>	<b>1000 0011 11</b>
<b>Green</b>	<b>0100 0011 11</b>
<b>Blue</b>	<b>0010 0011 11</b>
<b>White</b>	<b>0001 0011 11</b>
<b>Lime</b>	<b>0000 1011 11</b>

**NOTE:** When enabling multiple emitters, power consumption can exceed the power supply capacity! The power supply may shut down and then restart, repeating, causing a strobe (not recommended).

With rightmost switches set to 0101, each emitter (color) can be turned on and off using DMX. Channel selection (DMX address) is set by switches 1 thru 6 and starts at 001, incrementing by 6:

<b>Address 1</b>	<b>1000 0001 01 (RGBWL with DMX addresses)</b>
<b>Address 7</b>	<b>0100 0001 01</b>
<b>Address 13</b>	<b>0010 0001 01</b>
...	
<b>Address 379</b>	<b>1111 1101 01 (max address available for this mode)</b>

Other DMX modes (including 6-channel control) can be accessed using the Bluetooth module.