

# TRB-220

## MAXLUMINA® ROTATING BEACON

**TRB-220 is a high intensity rotating beacon capable of providing simple and complex flash characters. This beacon can be configured to provide high efficiency in effective intensities using a wide range of low wattage marine signal lamps as well as LED light source.**

Tideland Signal's TRB-220 MaxLumina® is excellent in battery operations where a proper charge level can be maintained through photovoltaic charging from solar panels. A 6-lens carousel, light source, gearless direct drive motor and electronic control module are contained in a watertight aluminium and fiberglass housing (IP65) with acrylic glazing and stainless steel fasteners.

Mounted on a light tower of proper height, TRB- 220 gives coastal shipping up to a 20NM range light (@ T = 0.74).

### Characteristics

- 6-lens carousel, consisting of a flash panel design with catadioptric prisms
- Operates with up to a 110W lamp without need for ventilation or cooling fans
- Brushless DC direct drive motor designed for smooth operation at low RPM
- Over 16 preprogrammed rotation periods, ranging from a period of 6 to 120 seconds
- 25 years of useful life
- Available in all IALA colours
- No scheduled maintenance for life of motor
- Accommodates Tideland's TF-3B MicroPower OMNIBUS® II 6-place lampchanger, MaxiHALO-60RB (LED) or MLED-Retro
- Automatic switchover to standby lantern
- Full monitor and control access



## Technical Details

<b>Power Consumption</b> Lamp version LED version Motor	As specified (from 3 to 110W) Up to 30W Average 2.5W
<b>Operating Temperature</b> DC Version AC Version (requires additional equipment)	9 - 36VDC 110 - 240VAC, 50/60Hz
<b>Light Source</b>	Tideland TF-3B OMNIBUS® II, high temperature, 3 or 6 place lampchanger, MaxiHALO-60RB (LED) or MLED-Retro
<b>Drive System</b>	Brushless DC motor; gearless direct drive
<b>Optics</b> Acrylic Moulded Flash Panel Glazing	110mm focal length, Catadioptric Fresnel Lens 330mm UV-resistant acrylic
<b>Lens Configuration</b> Standard	220mm Hexagonal
<b>Rotation Periods</b>	16 rotation periods, field selectable Standard Periods 120, 90, 72, 60, 48, 40, 30, 24, 20, 15, 12, 10, 9, 8, 7 and 6 seconds
<b>Environmental</b> Temperature Humidity	-40° C to +55° C 100% non-condensing
<b>Physical Size</b> Height Weight	915mm (36.0in) with spike 20kg (44lb)
<b>IP Rating</b>	IP65

NOTE: Specifications are subject to change.

A Proven and Reliable  
Design that Stood the Test of Time

### TRB-220 ROTATING BEACON, HEXAGONAL LENS CAROUSEL CONFIGURATION

LAMP SIZE	HOR. DIV. (deg)	FIXED INT.** (cd)	ROTATION PERIOD / SPEED							
			20 sec / 3.0 rpm	15 sec / 4.0 rpm	12 sec / 5.0 rpm	10 sec / 6.0 rpm	9 sec / 6.66 rpm	8 sec / 7.5 rpm	7 sec / 8.57 rpm	6 sec / 10.0 rpm
12V / 10W On-Time, Sec	1.60°	42,724	6,416 0.089	5,000 0.067	4,096 0.053	3,469 0.044	3,150 0.040	2,821 0.036	2,489 0.031	2,151 0.027
12V / 20W On-Time, Sec	1.53°	109,561	17,571 0.085	13,729 0.064	11,265 0.051	9,551 0.043	8,680 0.038	7,777 0.034	6,867 0.030	5,938 0.026
12V / 35W On-Time, Sec	1.93°	169,903	35,635 0.107	28,205 0.080	23,339 0.064	19,905 0.054	18,143 0.048	16,306 0.043	14,443 0.038	12,530 0.032
12V / 50W On-Time, Sec	1.90°	241,131	48,615 0.106	38,397 0.079	31,728 0.063	27,033 0.053	24,627 0.048	22,122 0.042	19,584 0.037	16,981 0.032
12V / 75W On-Time, Sec	2.35°	238,643	51,707 0.131	41,000 0.098	33,968 0.078	28,994 0.065	26,439 0.059	23,773 0.052	21,067 0.046	18,285 0.039
12V / 100W On-Time, Sec	2.40°	367,823	86,445 0.133	68,881 0.100	57,249 0.080	48,978 0.067	44,714 0.060	40,254 0.053	35,716 0.047	31,040 0.040

LAMP SIZE	HOR. DIV. (deg)	FIXED INT.** (cd)	ROTATION PERIOD / SPEED									
			120 sec / 0.5 rpm	90 sec / .666 rpm	72 sec / .833 rpm	60 sec / 1.0 rpm	48 sec / 1.25 rpm	40 sec / 1.5 rpm	30 sec / 2.0 rpm	24 sec / 2.5 rpm		
12V / 10W On-Time, Sec	1.60°	42,724	21,987 0.533	18,936 0.400	16,616 0.320	14,803 0.267	12,724 0.213	11,157 0.178	8,952 0.133	7,475 0.107		
12V / 20W On-Time, Sec	1.53°	109,561	58,509 0.51	50,670 0.383	44,652 0.306	39,912 0.255	34,438 0.204	30,285 0.170	24,400 0.128	20,430 0.102		
12V / 35W On-Time, Sec	1.93°	169,903	104,364 0.643	92,516 0.483	83,033 0.386	75,313 0.322	66,111 0.257	58,914 0.214	48,379 0.161	41,040 0.129		
12V / 50W On-Time, Sec	1.90°	241,131	145,260 0.633	128,321 0.475	114,848 0.380	103,935 0.317	90,993 0.253	80,916 0.211	66,245 0.158	56,077 0.127		
12V / 75W On-Time, Sec	2.35°	238,643	148,914 0.783	132,388 0.588	119,092 0.470	108,223 0.392	95,214 0.313	84,997 0.261	69,979 0.196	59,471 0.157		
12V / 100W On-Time, Sec	2.40°	367,823	238,459 0.800	213,526 0.600	193,204 0.480	176,414 0.400	156,105 0.320	139,990 0.267	116,032 0.200	99,077 0.160		

Effective Intensity Table for Selected Rotation Periods (All Calculations were made with the Schmidt-Clausen Method)

**\*\*NOTES:**

1. All fixed intensities were measured with the outer glazing in place.
2. The Schmidt-Clausen Formula is used in compliance with IALA's "Recommendation for the Calculation of the Effective Intensity of a Rhythmic Light", November 1980.
3. Intensities may be reduced due to shadowing when using a 6-place lampchanger by approximately 20% at two small arcs 180° apart.



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