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TEST REPORT #: 315334-1
LSR Job #: C-2509

Compliance Testing of:
Bluetooth LED Large Area Light with Built-in Charger

Prepared For:
Stanley Black and Decker
Attn: Kirwan Magdamo and Crystal Young
708 E. Joppa Road
Towson, MD 21286

This Test Report is issued under the Authority of:
John Johnston, EMC Engineer

Signature:  Date: 8/30/16

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EXHIBIT 1 INTRODUCTION

1.1 Client Information

Manufacturer Name:	Stanley Black and Decker
Address:	701 E Joppa Road Towson, MD 21286
Contact Name:	Kirwan Magdamo and Crystal Young

1.2 Equipment Under Test (EUT) Information

Product Name:	Bluetooth LED Large Area Light with Built-In Charger
Model Number:	DCL070
Serial Number:	000070; 000281; 000048

1.3 Product Description

The DCL070 Bluetooth (BLE) LED Area Light with Built-in Charger is a corded and cordless light or charger used to illuminate work areas. The unit is capable of operating on a 20 V battery or AC power. Additionally, the DCL070 may charge the 20 V battery when connected to AC power. Users can connect to and communicate with the DCL070 via the DEWALT Tool Connect App using a smartphone or tablet. The DCL070 can be programmed to turn on or off at scheduled time or intervals automatically.

1.4 Compliance Statement

The Bluetooth LED Large Area Light with Built-in Charger was evaluated against the limits of OET Bulletin 65. As such, the Bluetooth LED Large Area Light with Built-in Charger is found to be compliant as a mobile device.

EXHIBIT 2 MPE Calculations

A. Mobile (MPE)

OET Bulletin 65 limits for General population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	($180/f^2$)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

f = frequency in MHz *Plane-wave equivalent power density

RSS 102 limits for General population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field (V/m rms)	Magnetic Field (A/m rms)	Power Density (W/m^2)	Reference Period (minutes)
0.003-10[21]	83	90	-	Instantaneous*
0.1-10	-	$0.73/f$	-	6**
1.1-10	$87/f^{0.5}$	-	-	6**
10-20	27.46	0.0728	2	6
20-48	$58.07/f^{0.25}$	$0.1540/f^{0.25}$	$8.944/f^{0.5}$	6
48-300	22.06	0.05852	1.291	6
300-6000	$3.142f^{0.3417}$	$0.008335f^{0.3417}$	$0.02619f^{0.6834}$	6
6000-15000	61.4	0.163	10	6
15000-150000	61.4	0.163	10	$616000/f^{1.2}$
150000-300000	$0.158f^{0.5}$	$4.21 \times 10^{-4} f^{0.5}$	$6.67 \times 10^{-5} f$	$616000/f^{1.2}$

Note: f is frequency in MHz.
*Based on nerve stimulation (NS).
** Based on specific absorption rate (SAR).

Per RSS 102 issue 5 section 2.5.2, RF exposure evaluation is required if a separation distance between the user and/or bystander and the device's radiating element is greater than 20 cm, except when the device operates as follows:

- below 20 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 1 W (adjusted for tune-up tolerance);
- at or above 20 MHz and below 48 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than $22.48/f^{0.5}$W (adjusted for tune-up tolerance), where f is in MHz;
- at or above 48 MHz and below 300 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 0.6 W (adjusted for tune-up tolerance);
- at or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than $1.31 \times 10^{-2} f^{0.6834}$ W (adjusted for tune-up tolerance), where f is in MHz;
- at or above 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 5 W (adjusted for tune-up tolerance).

The following MPE calculations are based on the -0.726 dBm measured, peak conducted output provided to the antenna. The peak gain of the antenna is 0 dBi.

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = \frac{PG}{4\pi R^2}$$

where: S = power density
P = power input to the antenna
G = power gain of the antenna in the direction of interest relative to an isotropic radiator
R = distance to the center of radiation of the antenna

Maximum peak output power at antenna input terminal:	-0.73	(dBm)
Maximum peak output power at antenna input terminal:	0.845	(mW)
Antenna gain(typical):	0	(dBi)
Maximum antenna gain:	1.000	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	2402	(MHz)
MPE limit for uncontrolled exposure at prediction frequency:	1	(mW/cm^2)

Power density at prediction frequency:	0.000168	(mW/cm^2)
Maximum allowable antenna gain:	37.7	(dBi)
Margin of Compliance at 20 cm =	37.7	dB

Power Density = **0.000168 mW/cm^2** = **0.00168 W/m^2**

RF Exposure Evaluation:

Evaluated against exposure limits: General Public Use ☒ Controlled Use ☐
Duty cycle used in evaluation: 100 %
Standard(s)/Procedure(s) used for evaluation (e.g. IEEE C95.3): OET Bulletin 65 and RSS 102
Measurement distance: 20 cm
RF field strength value: **0.00168** V/m ☐ A/m ☐ W/m^2 ☒
Measured ☐ Computed ☐ Calculated ☒

The calculated power density of the EUT was found to be below the 1.0 mW/cm^2 OET Bulletin 65 MPE Limit. Per RSS 102 issue 5 section 2.5.2, since the EUT operates at 0.846 mW, which is less than

$$1.31 \times 10^{-2} * (2402)^{0.6834}\ W = 2.676\ W$$

The EUT is excluded from routine evaluation.