Linear Array & Tape Light
2-Channel Application Note

BIOS LINEAR ARRAY & TAPE LIGHT 2-CHANNEL OVERVIEW

BIOS Linear Arrays and Tapelight include two (2) LED channels that, when driven at different proportions, create unique spectral characteristics.

This document focuses on applications where a 2-channel approach is required/desired and describes the photometric results as the proportions are varied.

Note: Standard BIOS control protocol uses single-channel control via BIOS Bio-Dimming™ Module. For more information on single-channel control, please refer to the BIOS Gen2 Linear-Tapelight Specification Sheet at https://bioslighting.com/human/resources/.

BIOS Linear & Taple Light 2-Channel Driver Dimming Percentages

Nominal CCT	BIOS SkyBlue LED Channel (% Max Current)	Warm White LED Channel (% Max Current)
3000K	100%	0%
3500K	100%	0%
4000K	100%	0%

Note: The dimming percentages shown reflect BIOS recommended drive current percentages which are meant to optimize the visual and biological effect of the BIOS Linear Array and Tape Light while also achieving standard architectural CCTs.

Refer to the "Characteristics" Graphs on the following pages for information on 'non-standard' CCTs.

PERFORMANCE CHARACTERISTICS

Linear Array 2-Channel Technical Data

Data Shown for Junction Temperature (T_j) = 85°C

BIOS Part Number	Nominal Forward Current (mA) (Per Channel)	Nominal Input Power (W) (Per Channel)	Nominal Voltage (V) (Per Channel)	Maximum Voltage (V) (Per Channel)	Maximum Forward Current (mA) (Per Channel)[1]	Maximum Input Power (W) (Per Channel) [1]
BH-00SM-8XX-014020-1	100	4	36	39	200	8
BH-00SM-8XX-027920-1	200	7	36	39	400	16
BH-00SM-8XX-028919-1	200	7	36	39	400	16
BH-00SM-8XX-030319-1	200	7	36	39	400	16
BH-00SM-8XX-056020-1	400	14	36	39	800	31
BH-00DM-8XX-056020-1	600	22	36	39	1200	47
BH-00SM-8XX-056040-1	400	14	36	39	800	31

1. Maximum current and maximum power per channel also serve as guidelines for maximum current and maximum power for both channels combined.

Linear Array & Tape Light
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PERFORMANCE CHARACTERISTICS

Tapelight 2-Channel Technical Data

Data Shown for Junction Temperature (T_j) = 85°C

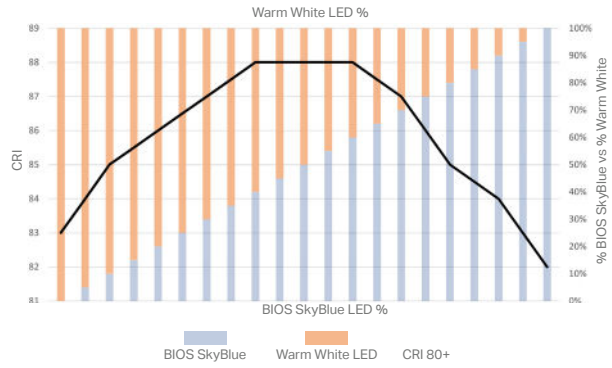
BIOS Part Number	Nominal Forward Current (mA) (Per Channel) [2]	Nominal Input Power (W) (Per Channel) [2]	Nominal Voltage (V) (Per Channel) [2]	Maximum Voltage (V) (Per Channel) [2]	Maximum Forward Current (mA) (Per Channel)[1, 2]	Maximum Input Power (W) (Per Channel) [1, 2]
BH-0TAP-8XX-010100-1	150	6	36	39	300	12

1. Maximum current and maximum power per channel also serve as guidelines for maximum current and maximum power for both channels combined.
2. Values shown represent 300mm (11.8in) tapelight length.

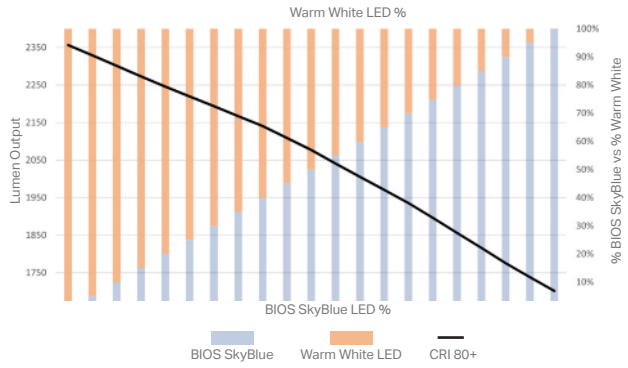
3000K CHARACTERISTICS

LINEAR AND TAPELIGHT

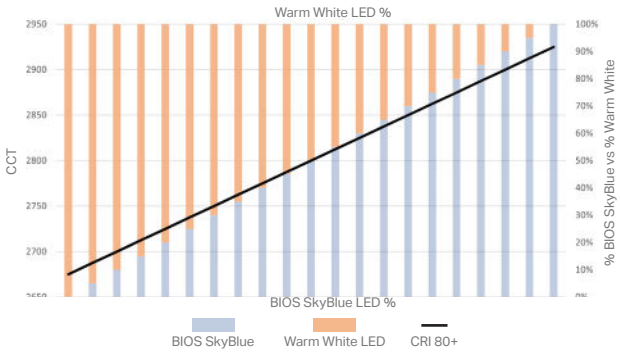
CRI
Warm White % and BIOS SkyBlue %



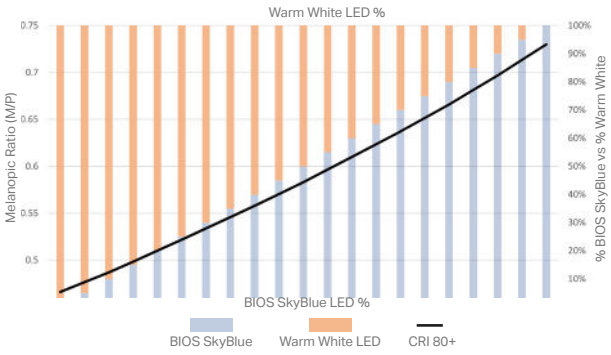
Lumens [a]
Warm White % and BIOS SkyBlue %



CCT [b]
Warm White % and BIOS SkyBlue %



Melanopic Ratio (M/P) [c]
Warm White % and BIOS SkyBlue %

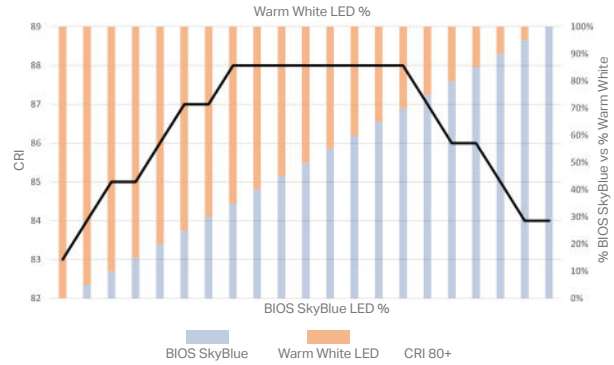


a. Lumen output refers to the 2 degree observer
b. CCT refers to the 10 degree observer
c. Melanopic ratios (M/P) provided have been calculated using the WELL v2 methodology. Corresponding CIE melanopic Daylight Equivalent Ratios (m-DER) can be extrapolated by applying a 10% reduction to the m/p ratios as shown.

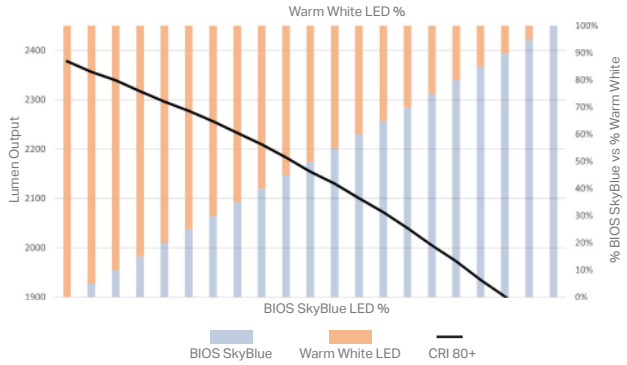
3500K CHARACTERISTICS

LINEAR AND TAPELIGHT

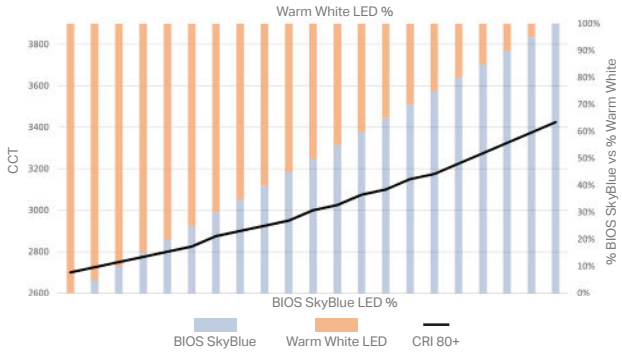
CRI
Warm White % and BIOS SkyBlue %



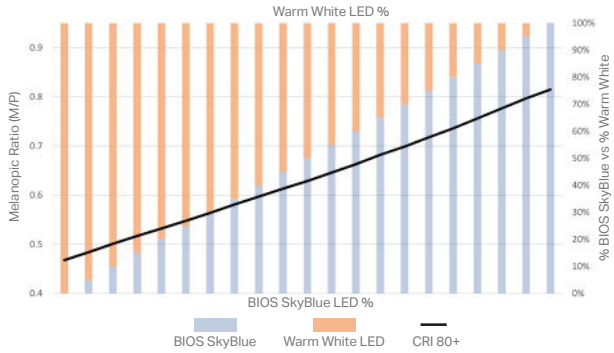
Lumens [a]
Warm White % and BIOS SkyBlue %



CCT [b]
Warm White % and BIOS SkyBlue %



Melanopic Ratio (M/P) [c]
Warm White % and BIOS SkyBlue %



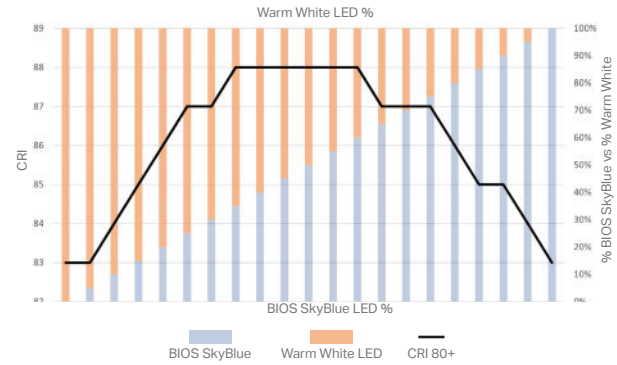
a. Lumen output refers to the 2 degree observer
b. CCT refers to the 10 degree observer
c. Melanopic ratios (M/P) provided have been calculated using the WELL v2 methodology. Corresponding CIE melanopic Daylight Equivalent Ratios (m-DER) can be extrapolated by applying a 10% reduction to the m/p ratios as shown.

Specifications and details subject to change without notice. Contact BIOS with any questions and for the most current information.

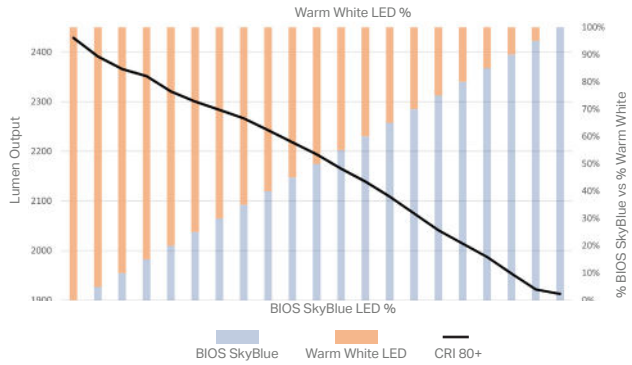
4000K CHARACTERISTICS

LINEAR AND TAPELIGHT

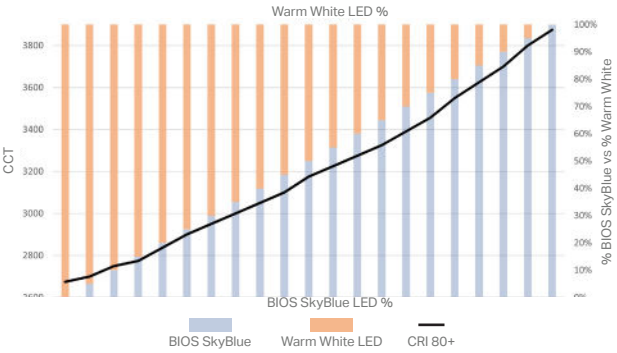
CRI
Warm White % and BIOS SkyBlue %



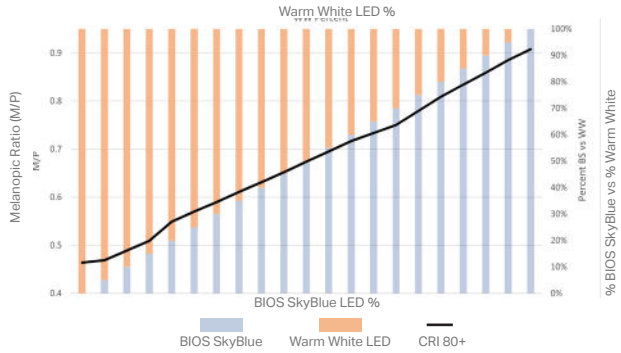
Lumens [a]
Warm White % and BIOS SkyBlue %



CCT [b]
Warm White % and BIOS SkyBlue %



Melanopic Ratio (M/P) [c]
Warm White % and BIOS SkyBlue %



a. Lumen output refers to the 2 degree observer
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