axis

Axitune®

How to Specify

The Axitune® Advantage.

Putting intelligence inside to make color quality simple.

The ability to change correlated color temperature (CCT) for various applications adds a dynamic quality to lighting, one that not only enhances architectural features, but can also positively affect health and wellbeing. Modulation of spectrum and intensity can help with circadian entrainment, which keeps a person's body clock aligned with the 24-hour day. It also provides time-of-day cues, to avoid confusion and delirium for a patient in an ICU, for example.

As is often the case, with added flexibility comes increased complexity. Axitune® technologies have been developed to make it simple for you. Our tunable white luminaires have reduced external programming requirements and put the intelligence inside to optimize for the features and benefits you need most.

◊ **Tunable White (TW).** Simple, intuitive 2-channel control over CCT and brightness. Axitune® intelligence in the luminaire takes care of the LEDs and control. Select the preferred CCT and you can dim it.

Axis luminaire optics are designed to support internal color mixing with SurroundLite, UltraBlend lenses, & louvers. We deliver uniform lens appearance and uniformity, and neutral grey shadows.

Color System Testing

Axis has performed extensive system testing of technologies to ensure proper system performance across the factors that matter most to specifiers, architects, owners, occupants and installers.
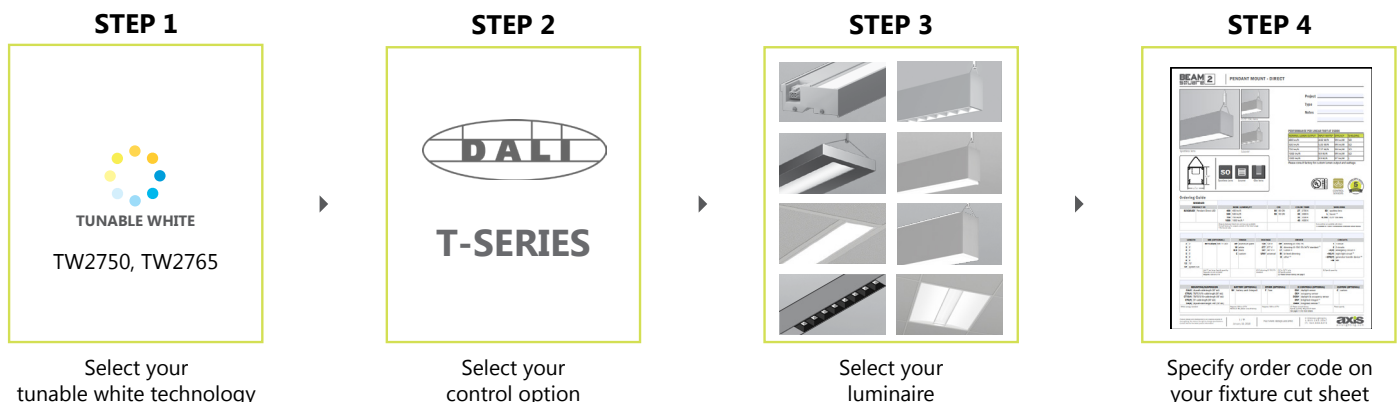
- ✓ Electronics
- ✓ Calibration
- ✓ User Interface
- ✓ Human Factors
- ✓ CRI
- ✓ Efficiency
- ✓ Duv
- ✓ TM30
- ✓ Controls and Protocols
- ✓ Spectral Power Distribution

Axis Color Lab, Research partnership with National Research Council of Canada

Specifying Axis Tunable White Technology

Axis tunable white systems can be specified in 4 easy steps. Details are provided below.

STEP 1	STEP 2	STEP 3	STEP 4
TUNABLE WHITE TW2750, TW2765	**DALI** **T-SERIES**		**BEAM 2**
Select your tunable white technology	Select your control option	Select your luminaire	Specify order code on your fixture cut sheet

STEP 1
Select Your Tunable White Technology

Dynamic White Lighting allows for tailored color mixing resulting in a wide range of CCTs to meet users' changing needs and preferences. We are offering two variations of CCT range to meet market demand, but TW2750 provides color mixing to result in a white that is closer to the Blackbody locus and minimizes Duv* compared to TW2765. Internal color mixing and proprietary lens technology assures good color uniformity and consistency.

* deviation from the Blackbody locus

How It Works
These 2-channel systems allow users to independently adjust CCT and brightness to their desired effect. White LEDs have undergone special sorting to optimize color quality. Both systems dim according to DALI 2.0 protocol.

Tunable White (TW)

TUNABLE WHITE

CCT Range	Ordering Code	Available CRI
2700K to 5000K	**TW2750**	80 or 90
2700K to 6500K	**TW2765**	80 or 90

STEP 2
Select Your Control Option

Three controls options are available for Tunable White. The DALI* protocol is a simple solution for controlling color using two wires with no polarity. DALI protocol supports control of brightness on one channel and CCT on another channel. The DALI system enables the use of broadcast or group scene commands so all luminaires change at the same time.

Axis Tunable White is enabled with EldoLED, Signify, Acuity and Lutron drivers.**

Most control companies are now moving to DALI Type 8 as the preferred control system for tunable white, due to its many benefits over DALI Type 6. By using one address to control two channels - color temperature and brightness - it reduces the number of drivers, wiring and DALI addresses needed in an application, providing cost savings and reduced system complexity. We have tested several interfaces for compatibility, but it's up to the customer to ensure that every system is checked for compliance with the building's DALI control system. Contact Axis for the latest available options.
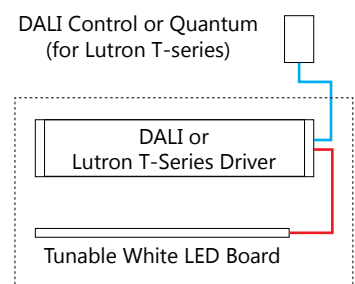
DALI Control or Quantum
(for Lutron T-series)

DALI or
Lutron T-Series Driver

Tunable White LED Board

Tunable White Control Configuration

Code	Description	Brightness	CCT
DALIDT6	DALI Type 6 (Two DALI Addresses)	✓	✓
***DALIDT8	DALI Type 8 (One DALI Address)	✓	✓
****LTTW	Lutron T-Series Tunable White	✓	✓

* DALI stands for Digital Addressable Lighting Interface, which is operated by the DALI Alliance.
**Axis is an EldoLED, Signify, Acuity and Lutron Technology partner.
***DALIDT8 is the default option if compatible with the building control system.
****LTTW is available with luminaires min 3' and longer. For luminaires shorter than 3' please consult factory.
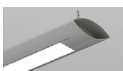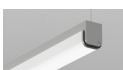
STEP 3
Select Your Luminaire

Tunable White

Ordering Code	TW2750	TW2765
CCT Range	2700K-5000K	2700K-6500K
Available CRI	80 or 90 CRI	80 or 90 CRI
Channel	2	2
Compatible Driver Options	DALIDT6, DALIDT8, LTTW	DALIDT6, DALIDT8, LTTW

PRODUCT		TW2750	TW2765
	202 Pendant, Wall	✓	✓
	Arc Pendant, Wall	✓	✓
	Air Pendant, Surface, Wall	✓	✓
	Aura, Dia, Day Troffers	✓	✓
	Beam 2 Square Direct Pendant, Wall, Surface	✓	✓
	Beam 2 Square Indirect Pendant, Wall	✓	✓
	Beam 2 Recessed	✓	✓
	Beam 2 Direct/Indirect, Direct Pendant, Wall, Surface	✓	✓
	Beam 2 Indirect Pendant, Wall	✓	✓
	Beam 2 MikroLite™ 1.5 Pendant Combined, MikroLite Only	✓	✓
	Beam 3 Direct/Indirect, Direct Pendant, Wall, Surface	✓	✓
	Beam 3 Indirect Pendant, Wall	✓	✓
	Beam 3 Recessed, Perimeter Recessed	✓	✓
	Beam 4 Direct/Indirect, Direct Pendant, Wall, Surface	✓	✓
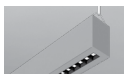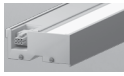
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STEP 3
Select Your Luminaire

Tunable White

Ordering Code		TW2750	TW2765
CCT Range		2700K-5000K	2700K-6500K
Available CRI		80 or 90 CRI	80 or 90 CRI
Channel		2	2
Compatible Driver Options		DALIDT6, DALIDT8, LTTW	DALIDT6, DALIDT8, LTTW

PRODUCT			TW2750	TW2765
		Beam 4 Indirect Pendant, Wall	✓	✓
		Beam 4 MikroLite™ 1.5 Pendant Combined	✓	✓
		Beam 4 Recessed, Perimeter Recessed	✓	✓
		Beam 6 Direct/Indirect, Direct Pendant, Wall, Surface	✓	✓
		Beam 6 Recessed, Perimeter Recessed	✓	✓
		Cove Perfekt™ Ceiling Hi-Output, Lo-Output	✓	✓
		Cove Perfekt™ Wall Hi-Output, Lo-Output	✓	✓
		Elle™ Ceiling Line Corner, 90⁰, 45⁰	✓	✓
		Geometric™ Recessed	✓	✓
		Graze Perfekt Perimeter, Pendant, Surface	✓	✓
		LT SurroundLite® Pendant, Wall	✓	✓
		Mini Box Pendant, Wall, Wall Vertical, Surface	✓	✓
		Prime Pendant, Wall, Surface	✓	✓
		Sculpt™ Direct/Indirect, Direct Pendant, Wall, Surface	✓	✓
		Sculpt™ Indirect Pendant, Wall	✓	✓
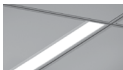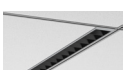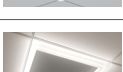
STEP 3
Select Your Luminaire

Tunable White

Ordering Code	TW2750	TW2765
CCT Range	2700K-5000K	2700K-6500K
Available CRI	80 or 90 CRI	80 or 90 CRI
Channel	2	2
Compatible Driver Options	DALIDT6, DALIDT8, LTTW	DALIDT6, DALIDT8, LTTW

PRODUCT		TW2750	TW2765
	Sculpt™ Recessed, Perimeter Recessed	✓	✓
	Sculpt™ MikroLite™ 1.5 Pendant Combined, Direct MikroLite Only, Direct/Indirect MikroLite Only	✓	✓
	Sculpt™ MikroLite™ 1.5 Recessed Combined, MikroLite Only	✓	✓
	Sculpt™ MikroLite™ 1.5 Surface Combined, MikroLite Only	✓	✓
	Sculpt™ SoftZone® Pendant Direct/Indirect, Direct, Indirect	✓	✓
	SideStep Pendant	✓	✓
	Sketch® Recessed	✓	✓
	SkyeFall Recessed 2x2	✓	✓
	SkyePool Recessed 2x2	✓	✓
	SkyePlane Regressed 1x1, 1x2, 1x4, 2x2, 2x4	✓	✓
	SkyeScape Recessed 2x2	✓	✓
	SkyeView Recessed 2x2	✓	✓
	SkyeView Recessed 1x4	✓	✓
	Slim Pendant Direct, Semi-Direct, Indirect, Semi-Indirect	✓	✓
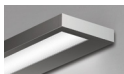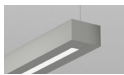
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STEP 3
Select Your Luminaire

Tunable White

Ordering Code		TW2750	TW2765
CCT Range		2700K-5000K	2700K-6500K
Available CRI		80 or 90 CRI	80 or 90 CRI
Channel		2	2
Compatible Driver Options		DALIDT6, DALIDT8, LTTW	DALIDT6, DALIDT8, LTTW

		▼	▼
	Slim Wall Indirect, Semi-Indirect	✓	✓
	Twig Semi-Indirect Pendant, Wall	✓	✓
	Wall Wash Perfekt Recessed, Pendant, Surface	✓	N/A
	Flexible Ambient 1x1, 1x4, 2x2, 2x4	✓	✓
	Multi-Function Asymmetric Overbed Single, Duo	✓	✓
	Multi-Function Overbed 2x2, 2x4	✓	✓
	Sconces Box, Open Book, Closed Book	✓	✓
	Tranquility Drop Lens 2x2	✓	✓
	Tranquility Overlay Lens 2x2, 4x4	✓	✓
	Tranquility Regressed Lens 2x2, 2x4	✓	✓
	Tranquility Sconces Box, Open Book, Closed Book	✓	✓
	Elle Ceiling Line, Corner, 45⁰	✓	✓

BALANCEDCARE PRODUCTS

STEP 4
Specify on your Fixture Cutsheet

How to Specify your new Axis Tunable Technology.
Example:

Fixture selection: BEAM 2 Square Pendant Direct
From Step 3 on p. 3, verify fixture/technology compatibility in matrix shown on p. 3. Click on fixture image in left column to pull up ordering cut sheet.

Technology selection: 2700K to 5000K Tunable White
From STEP 1, note technology code (TW2750) in COLOR TEMP field.

Control selection: DALI TYPE 6
From Step 2, note control code (DALIDT6) in DRIVER field.

1. Tunable White technology <u>NOT AVAILABLE</u> with integrated sensors.
2. Tunable White technology <u>AVAILABLE</u> with battery packs connected to the cool color.

Please consult factory for additional information.

See STEP 3   **See STEP 1**

| B2SQDLED | — | 400 | — | 90 | — | TW2750 | — | UB | — |

PRODUCT ID		NOM. LUMENS/FT		CRI		COLOR TEMP.		SHIELDING	
B2SQDLED Pendant Direct LED		**400** 400 lm/ft **500** 500 lm/ft **750** 750 lm/ft **1000** 1000 lm/ft ^		**80** 80 CRI **90** 90 CRI		**TW2750** 2700-5000K **TW 2765** 2700-6500K		**SO** spotless lens **L** louver (1) **0.25G** 0.25" Glo lens **UB** Ultra blend	
		Outputs between listed min and max are available. Consult factory for outputs outside of the listed range. * For louver only						SurroundLite not available with direct (1) Available in 3' and 4' combinations; otherwise consult factory.	

See STEP 2

| 8 | — | | — | AP | — | UNV | — | TW(DALIDT6) | — | 1 | — |

LENGTH		MR (OPTIONAL)		FINISH		VOLTAGE		DRIVER		CIRCUITS	
2 2' **3** 3' **4** 4' **5** 5' **6** 6' **8** 8' **12** 12' **S#** system run		**DMLED(#)** downlight modle LED		**AP** aluminum paint **W** white **BLK** black **C** custom		**120** 120 V **277** 277 V **347** 347 V (2) **UNV** universal		**TW(DALIDT6)** DALI Type 6 (Two DALI Addresses) **TW(DALIDT8)** DALI Type 8 (One DALI Address) **TW(LTTW)** Lutron T-Series Tunable White		**1** 1 circuit **2** 2 circuits **+E(#)** emergency circuit (5) **+NL(#)** night light circuit (5) **+GTD(#)** generator transfer device (5)	
		Add 9" per lamp. Specify quantity. Separate circuits included. Requires 120V or 277V. Available in luminaires with Axitune® and BIOS but downlight modules will not be tunable white or BIOS LEDs				(2) D dimming (0- 10V) 5% standard		Refer to step 2 for the list of available drivers for the different TW options. █ **Tunable White (TW)**		(5) Specify quantity	

MOUNTING/SUSPENSION		BATTERY (OPTIONAL)		OTHER (OPTIONAL)		IC CONTROLS (OPT.)		CUSTOM (OPT.)	
CA(#) drywall+cable length (36" std.) **CT9(#)** TB/TG 9/16+cable length (36" std.) **CT15(#)** TB/TG15/16+cable length (36" std.) **CTS(#)** screw slot+cable length (36" std.) **SA(#)** drywall+stem length >48" (18" std.) **CASL(#)** drywall cable sloped ceiling **SASL(#)** drywall stem sloped ceiling		**B(#)** battery pack (integral)		**F** fuse		**DS(#)** daylight sensor **OS(#)** occupancy sensor **DOS(#)** daylight & occupancy sensor **EN(#)** Enlighted integral* **ENR(#)** Enlighted remote* **WC(#)** wireless control dimming		**C** custom	
See Mounting kit guide for full specification code. White canopy standard		Minimum 4ft; please consult factory		Requires 120V or 277V		*Please consult factory See integrated controls guide for more details. Specify quantity. Requires 8" blank Consult factory for Tunable White. Not available with DPB (DYN) driver for BIOS with Dynamic Spectrum.		Please specify	

Example:
RESULTING ORDERING CODE:
B2SQDLED-400-90-TW2750-SO-8-AP-UNV-DALIDT8-1-CA(36)

Refer to specification sheet for complete details, and other design solutions.

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