

# CoolStar® 3445 Application Note

## - Narrow beam compact spot lights



The market of compact spot lights for use in kitchens, porches, balconies,... is more and more asking for high-end lighting designs with consistent colors, long life time, perfect thermal management and a good flexibility in optical choices.

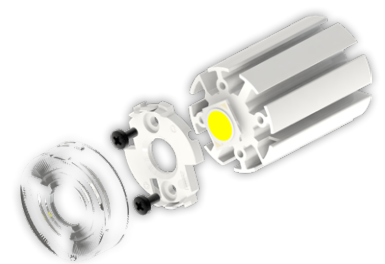
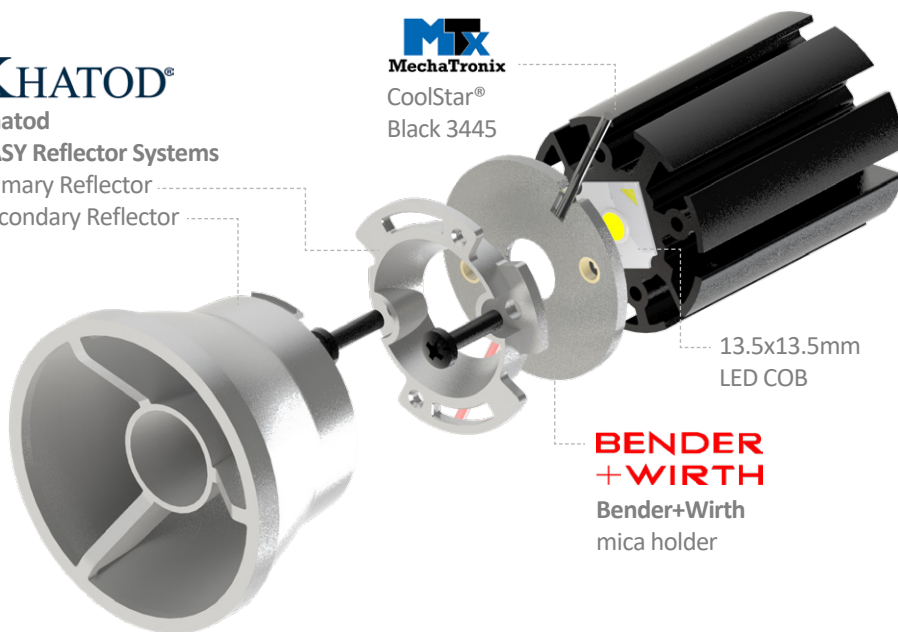


To fulfill that demand in the market, MechaTronix has developed the CoolStar® 3445, a high end spotlight led cooler for designs in a 35 millimeter diameter. In this application note we show you the flexibility this platform offers you with regards to LED COBs, holders and lenses and reflectors which can be combined.

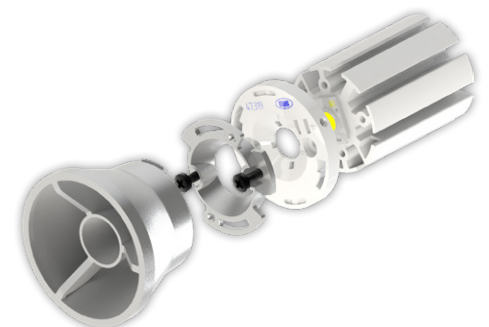
An example of a perfect market fit:

**KHATOD®**  
 Khatod  
 EASY Reflector Systems  
 Primary Reflector  
 Secondary Reflector

**MeX**  
**MechaTronix**  
 CoolStar®  
 Black 3445



▲ CoolStar® White 3445 with LedLink connector and CHQ series lens



▲ CoolStar® White 3445 with BJB LED holder + Khatod EASY Reflector Systems



# CoolStar® 3445 Application Note

Issue by MTX John Hsu (john@mechatronix-asia.com)

LED COB				Holder		Lens & Reflector					
Brand	Series	High CRI	Model	Brand	Model	Brand	Model	Narrow Beam model			
Bridgelux	Gen 7 V series V10 LED Array		BXRE-xxx100x-x-7x	BJB	47.319.6060	Khatod	KCLP1856CR				
		CRI 97	BXRE-27H100x-x-7x BXRE-30H100x-x-7x								
	Gen 7 V series V13 LED Array		BXRE-xxx200x-x-7x	BJB	47.319.6024						
		CRI 97	BXRE-27H200x-x-7x BXRE-30H200x-x-7x								
	Gen 7 V series V4 HD LED Array		BXRH-xxx060x-A-73	Ledlink	LL01A00XVWB2				Ledlink	LL01ZZ-DYFxxL52-M2	LL01ZZ-DYF15L52-M2
	Gen 7 V series V6 HD LED Array		BXRE-27H060x-x-73 BXRE-30H060x-x-73	B+W TE	460 Typ Z3 2213675-5				Khatod	KCLP1856CR	
CRI 97		BXRH-xxx100x-B-73 BXRE-27H100x-x-73 BXRE-30H100x-x-73									
Vesta Series Dim-To-Warm 9mm LED Array			BXRV-DR-xxxx-1000-x-13	BJB	47.319.6380	Khatod	KCLP1856CR				
Citizen	Citiled COB CLU02J		CLU02J-xxxxxx	BJB	47.319.6060 47.360.1020 434 Typ Z3 2213678-5	Khatod	KCLP1856CR				
		B+W TE									
		Ledlink	LL01A00CSNB2 LL01A00XVWB2	Ledlink	LL01CR-CEWxxxx LL01CR-CHQxxxx LL01ZZ-DYFxxL52-M2	LL01CR-CEW12L02 LL01CR-CHQ24L02 LL01ZZ-DYF15L52-M2					
		CRI 97	CLU02J-12xxC9-xx2H7U4	BJB	47.319.6060 47.360.1020 434 Typ Z3 2213678-5	Khatod	KCLP1856CR				
				B+W TE							
		Ledlink	LL01A00CSNB2 LL01A00XVWB2	Ledlink	LL01CR-CEWxxxx LL01CR-CHQxxxx LL01ZZ-DYFxxL52-M2	LL01CR-CEW12L02 LL01CR-CHQ24L02 LL01ZZ-DYF15L52-M2					
	Citiled COB High Intensity Type Version 3 CLU7B2 - CLU7A	CLU7B2-0701C4			BJB	47.319.6060 47.360.1020 434 Typ Z3 2213678-5	Khatod	KCLP1856CR			
			B+W TE								
		Ledlink	LL01A00CWGB2 LL01A00XVWB2	Ledlink	LL01CR-CEWxxxx LL01CR-CHQxxxx LL01ZZ-DYFxxL52-M2	LL01CR-CEW12L02 LL01CR-CHQ24L02 LL01ZZ-DYF15L52-M2					
		CRI 97	CLU7B2-0701C4-xx3H7R4	BJB	47.319.6060 47.360.1020 434 Typ Z3 2213678-5	Khatod	KCLP1856CR				
				B+W TE							
		Ledlink	LL01A00CWGB2 LL01A00XVWB2	Ledlink	LL01CR-CEWxxxx LL01CR-CHQxxxx LL01ZZ-DYFxxL52-M2	LL01CR-CEW12L02 LL01CR-CHQ24L02 LL01ZZ-DYF15L52-M2					
CRI 97	CLU7A2-0403C9-xx3H7R4	BJB	47.319.6060 47.360.1020 434 Typ Z3 2213678-5	Khatod	KCLP1856CR						
		B+W TE									
Ledlink	LL01A00CWGB2 LL01A00XVWB2	Ledlink	LL01CR-CEWxxxx LL01CR-CHQxxxx LL01ZZ-DYFxxL52-M2	LL01CR-CEW12L02 LL01CR-CHQ24L02 LL01ZZ-DYF15L52-M2							
CRI 97	CLU7A2-1201C9-xx3H7R4	BJB	47.319.6060 47.360.1020 434 Typ Z3 2213678-5	Khatod	KCLP1856CR						
		B+W TE									
Ledlink	LL01A00CWGB2 LL01A00XVWB2	Ledlink	LL01CR-CEWxxxx LL01CR-CHQxxxx LL01ZZ-DYFxxL52-M2	LL01CR-CEW12L02 LL01CR-CHQ24L02 LL01ZZ-DYF15L52-M2							
Cree	XLamp CMT LED Arrays 1407		CMT-1407	B+W TE	434 Typ Z3 2213678-5	Khatod	KCLP1856CR				
		CRI 95	CMT-1407-0000-00N0Z0Axxx								
	XLamp CMA LED Arrays 1303		CMA1303	Ledlink	LL01A00CWFb2 LL01A00XVWB2 LL01A00CZNB2-M2	Ledlink	LL01CR-CEWxxxx LL01CR-CHQxxxx LL01ZZ-DYFxxL52-M2	LL01CR-CEW12L02 LL01CR-CHQ24L02 LL01ZZ-DYF15L52-M2			
		CRI 95	CMA1303-0000-000C0Z0Axxx	Ledlink	LL01A00CWFb2 LL01A00XVWB2 LL01A00CZNB2-M2	Ledlink	LL01CR-CEWxxxx LL01CR-CHQxxxx LL01ZZ-DYFxxL52-M2	LL01CR-CEW12L02 LL01CR-CHQ24L02 LL01ZZ-DYF15L52-M2			

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LED COB				Holder		Lens & Reflector				
Brand	Series	High CRI	Model	Brand	Model	Brand	Model	Narrow Beam model		
Edison	EdiPower V HE Series		2PHE03	B/B B+W	47.360.1020 434 Typ Z3	Khatod	KCLP1856CR			
		CRI 95	2PHE03XX56XXXXXX							
			2PHE06							
	CRI 95	2PHE06XX56XXXXXX								
	EdiPower V HM Series		2PHM10							
	CRI 95	2PHM10xx56xxxxxx								
EdiPower V HD Series		2PHD10								
			2PHD13							
Lumileds	Gen 4 Luxeon CoB Core 1202		L2C5-xxxx1202E0900	B+W	480 Typ Z3	Khatod	KCLP1856CR			
				TE	2213929-5					
				Ledlink	LL01A00CSLB2	Ledlink	LL01CR-CEWxxxx	LL01CR-CEW12L02		
Luminus	STANDARD GEN 4 COB ARRAYS		CXM-3	B/B	47.319.6060 47.360.1020	Khatod	KCLP1856CR			
		CRI 90	CXM-3-XX-90-X-AC40-XX-X							
			CXM-4							
		CRI 90	CXM-4-XX-90-X-AC40-XX-X	B+W	434 Typ Z3					
			CXM-6							
		CRI 90	CXM-6-XX-90-X-AC40-XX-X							
				B/B	47.319.6060 47.360.1020	Khatod	KCLP1856CR			
				B+W	434 Typ Z3					
				Ledlink	LL01A00CWGB2				Ledlink	LL01CR-CHQxxxx
			CRI 90	CXM-6-XX-90-X-AC40-XX-X	B/B	47.319.6060 47.360.1020	Khatod	KCLP1856CR		
			B+W	434 Typ Z3						
			Ledlink	LL01A00CWGB2	Ledlink	LL01CR-CHQxxxx				LL01CR-CHQ24L02
				CIM-9	B/B	47.319.6060 47.360.1020	Khatod	KCLP1856CR		
			CRI 90	CIM-9-XX-90-X-AC40-XX-X						
				CLM-9						
			CRI 90	CLM-9-XX-90-X-AC40-XX-X	B+W	434 Typ Z3				
	STANDARD GEN 3 COB ARRAYS			CXM-6	B/B	47.319.6060 47.360.1020	Khatod	KCLP1856CR		
										B+W
			Ledlink	LL01A00CWGB2						Ledlink
			CRI 90	CXM-6-xx-95-36-AC30-xx-x	B/B	47.319.6060 47.360.1020	Khatod	KCLP1856CR		
			B+W	434 Typ Z3						
			Ledlink	LL01A00CWGB2	Ledlink	LL01CR-CHQxxxx				LL01CR-CHQ24L02
				CIM-9	B/B	47.319.6060 47.360.1020	Khatod	KCLP1856CR		
			CRI 90	CIM-9-xx-95-36-AC30-xx-x						
				CLM-9						
		CRI 90	CLM-9-xx-95-36-AC30-xx-x	B+W	434 Typ Z3					
Nichia	Standard COB 012B		NTCW012B	B/B	47.319.6180	Khatod	KCLP1856CR			
	Standard COB 024B		NTCS024B							
OSRAM	PrevaLED Core G7 L10 H1		PL-CORE-G7 1000-xxx L10 H1			Khatod	KCLP1856CR			
OSRAM OS	Soleriq S9		GW KAFXXX.XX	B/B B+W	47.360.1020 47.319.6294 434 Typ Z3	Khatod	KCLP1856CR			
		CRI 90	GWKAFXXX.CM							
		CRI 97	GW KAFXXX.BM							
Philips	Fortimo SLM 1202 Gen 6		Fortimo SLM C xxx 1202 L06 1215 G6	B/B	47.319.6180	Khatod	KCLP1856CR			
Seoul	Acrich MJT COB 13.5x13.5mm		SAWx0661A	B/B	47.360.1020 47.319.6294	Khatod	KCLP1856CR			
		CRI 97	SAWS0661A							
	ZC4 / ZC6 Z-Power COB		SDWxxF1	TE	2213678-5					
				B+W	434 Typ Z3					
Tridonic	Module SLE G7 ADV 09mm		SLE G7 09mm 1200lm xxx x ADV	B/B	47.360.1020 47.319.6294	Khatod	KCLP1856CR			
		CRI >90	SLE G7 09mm 1200lm 940 R ADV							
	Module SLE G7 9mm 800 / 2,600lm ADV		SLE G7 09mm 800lm/2600lm xxx x							
		CRI >90	SLE G7 09mm 800lm 9xx R ADV							
			SLE G7 09mm 2600lm 9xx R ADV	Tridonic	28001038					
VS	LUGA Shop Gen 7		DMS102XXXW	B+W	434 Typ Z3	Khatod	KCLP1856CR			
			DMS102S31WP							
		CRI 95	DMS102S32WC							
			DMS102D27W							
			DMS102S3XXW							
		CRI 95	DMS124XXXW							
			DMS124SXXW							
Xicato	XOB04		XOB04xxxx04x0921	B+W	486 Typ Z3	Khatod	KCLP1856CR			
		CRI 95	XOB0495xxx04x0921							
	XOB06		XOB06xxxx10x3321							
		CRI 95	XOB0695xx10x3321							