



Summary of Ubend TLED Compatibility Test
Order Codes: 10626 & 10627

Phenomenon:

- F Flicker after >2s start-up,
- N Acoustic noise >20dB
- T THD >30%
- P P,F <0.85
- S Can't start-up
- C compatible

Ballast Brand	Part Number	Start Method	# of Lamps	BF		Lamp Connection	1-Lamp				2-Lamp				3-Lamp				4-Lamp											
				Type	Value		108Vac	120Vac	132Vac	277Vac	305Vac	108Vac	120Vac	132Vac	277Vac	305Vac	108Vac	120Vac	132Vac	277Vac	305Vac	108Vac	120Vac	132Vac	277Vac	305Vac				
EIKO	PM-2X32T8-UNV-IS-L	IS	2	L	0.77	Parallel	C	C		P	P	C	C		C	C		C	C		C	C		C	C					
EIKO	PM-3X32T8-UNV-IS	IS	3	N	0.87	Parallel	C	C		C	P,T	C	C		C	C		C	C		C	C		C	C					
EIKO	PM-3X32T8-UNV-IS-H	IS	3	H	1.18	Parallel	C	C		C	C	C	C		C	C	C	C		C	C		C	C						
EIKO	PM-3X32T8-UNV-IS-L	IS	3	L	0.78	Parallel	C	C		C	P,T	C	C		C	C		C	C		C	C		C	C					
EIKO	PM-4X32T8-UNV-IS	IS	4	N	0.88	Parallel	C	C		C	P,T	C	C		C	C	C	C		C	C	C	C		C	C				
EIKO	PM-4X32T8-UNV-IS-L	IS	4	L	0.78	Parallel	C	C		C	P	C	C		C	C	C	C		C	C	C	C		C	C				
EIKO	PM-2X32T8-UNV-IS	IS	2	N	0.87	Parallel	C	C		C	P	C	C		C	C		C	C		C	C		C	C					
EIKO	PM-3X32T8-UNV-PS	PS	3	N	0.88	Series	S	S		S	S	S	S		S	S	S	S		S	S		S	S						
EIKO	PM-3X32T8-UNV-PS-H	PS	3	H	1.18	Series	S	S		S	S	S	S		S	S	S	S		S	S		S	S						
ESPEN	VE232MVHIPE	IS	2	N	0.89	Parallel	C	C		C	C	C	C		C	C		C	C		C	C		C	C					
ESPEN	VE232MVHIPHE	IS	2	H	1.19	Parallel	C	C		C	C	C	C		C	C		C	C		C	C		C	C					
ESPEN	VE232MVHIPL	IS	2	L	0.77	Parallel	C	C		C	C	C	C		C	C		C	C		C	C		C	C					
ESPEN	VE232MVHRPHT3-AB	PS	2	H	1.20	Series	S	S		S	S	P	P		C	P														
General Electric	GE-232-MV-N	IS	2	N	0.88	Parallel	C	C		C	C	C	C		C	C		C	C		C	C		C	C					
General Electric	GE232MAX-N/ULTRA	IS	2	N	0.88	Parallel	C	C		C	C	C	C		C	C		C	C		C	C		C	C					
General Electric	GE432MAX-H/ULTRA	IS	4	H	1.18	Parallel	C	C		P,T	P,T	C	C		P	P,T	C	C		P	P	C	C		C	P				
General Electric	GE432MAX-L/ULTRA	IS	4	L	0.78	Parallel	C	C		C	P,T	C	C		C	C	C	C		C	C	C	C		C	C				
General Electric	GE-232-MAX-H/Ultra	IS	2	H	1.15	Parallel	C	C		C	P	C	C		C	C		C	C		C	C		C	C					
General Electric	GE432MAX-G-N	IS	4	N	0.88	Parallel	C	C		P,T	P,T	C	C		C	C	C	C		C	C	C	C		C	C				
General Electric	GE132MAX-G-N	IS	1	N	0.88	n.a	C	C		C	C	C	C		C	C		C	C		C	C		C	C					
General Electric	GE132MAX-H/ULTRA	IS	1	H	1.18	n.a	C	C		C	C	C	C		C	C		C	C		C	C		C	C					
General Electric	GE132MAX-L/ULTRA	IS	1	L	0.78	n.a	C	C		C	C	C	C		C	C		C	C		C	C		C	C					
General Electric	GE132MAXP-N/ULTRA	IS	1	N	0.88	n.a	C	C		C	C	C	C		C	C		C	C		C	C		C	C					
General Electric	GE232MV-N-DIY	IS	2	N	0.88	Parallel	C	C		C	C	C	C		C	C		C	C		C	C		C	C					
General Electric	GE232-120-RES	IS	2	N	0.83	Parallel	P,T	P,T	P,T			P,T	P,T	P,T																
General Electric	GE232MAX-L/ULTRA	IS	2	L	0.78	Parallel	C	C		C	C	C	C		C	C		C	C		C	C		C	C					
General Electric	GE332MV-N	IS	3	N	0.87	Parallel	C	C		C	P	C	C		C	C	C	C		C	P									
General Electric	GE332MAX-N/ULTRA	IS	3	N	0.88	Parallel	C	C		C	P	C	C		C	C	C	C		C	C		C	C		C	C			
General Electric	GE332MAX-L/ULTRA	IS	3	L	0.78	Parallel	C	C		P	P	C	C		C	C	C	C		C	C		C	C		C	C			
General Electric	GE332MAX-G-N	IS	3	N	0.87	Parallel	C	C		C	P	C	C		C	C	C	C		C	C		C	C		C	C			
General Electric	GE332MAXP-H/ULTRA	IS	3	H	1.18	Parallel	C	C		C	C	C	C		C	C	C	C		C	C		C	C		C	C			
General Electric	GE432-120-RES	IS	4	N	0.83	Parallel	P,T	P,T	P,T			P,T	P,T	P,T			P,T	P,T	P,T			P,T	P,T	P,T						
General Electric	GE432MV-N-42T	IS	4	N	?	Parallel	C	C		C	P,T	C	C		C	C	C	C		C	C	C	C		C	C				
General Electric	GE432MAX-N/ULTRA	IS	4	N	0.88	Parallel	C	C		C	P,T	C	C		C	C	C	C		C	C	C	C		C	C				
General Electric	GE232-MVPS-N	PS	2	N	0.88	Parallel	C	C		C	P,F	C	C		C	P,F														
General Electric	GE-332-MVPS-N	PS	3	N	0.88	Parallel	C	C		P	P	C	C		C	C	C	C		C	C		C	C		C	C			
General Electric	GE432-MVPS-N	PS	4	N	0.88	Parallel	C	C		P,T	P,T,F	C	C		T	P,T,F	C	C		C	P,F	C	C		C	P,F				
General Electric	GE-232-MV-PS-N	PS	2	N	0.88	Parallel	C	C		C	C	C	C		C	C														
Halco	EP232IS/L/MV/SL	IS	2	L	0.78	Parallel	C	C		C	C	C	C		C	C		C	C		C	C		C	C		C	C		
Halco	E432IS/120R/SL	IS	4	N	0.87	Parallel	P,T	P,T	P,T			P,T	P,T	P,T			P,T	P,T	P,T			P,T	P,T	P,T						
Halco	EP232IS/MV/HE	IS	2	N	0.88	Parallel	C	C		C	F	C	C		C	C		C	C		C	C		C	C		C	C		
Halco	EP332IS/MV/HE	IS	3	N	0.87	Parallel	C	C		C	C	C	C		C	C	C	C		C	C		C	C		C	C			
Halco	EP432IS/MV/HE	IS	4	N	0.88	Parallel	C	C		P	P,F	C	C		P,F	C	C	C		P,F	P	P		C	P,F					
Halco	EP432IS/L/MV/HE	IS	4	L	0.78	Parallel	C	C		C	F	C	C		P,F	C	C	C		C	C	C	C		C	C		C	C	
HOWARD INDUSTRIES	EPH4/32IS/MV/SC/HE	IS	4	H	1.16	Parallel	C	C		P	P	C	C		C	C	C	C		C	C	C	C		C	C		C	C	
HOWARD INDUSTRIES	EP3/32IS/MV/SC/HE	IS	3	N	0.87	Parallel	C	C		C	C	C	C		C	C	C	C		C	C		C	C		C	C		C	C
HOWARD INDUSTRIES	EPL4/32IS/MV/MC/HE	IS	4	L	0.77	Parallel	C	C		P	P	C	C		C	P,F	C	C		C	C	C	C		C	C		C	C	
HOWARD INDUSTRIES	EPH2/321S/MV/MC/HE	IS	2	H	1.18	Parallel	C	C		C	P,F	C	C		C	C														
HOWARD INDUSTRIES	E2/32IS-120MC	IS	2	N	0.85	Parallel	P,T	P,T	P,T			C	C	P																
HOWARD INDUSTRIES	EPL2/32IS/MV/MC/HE	IS	2	L	0.78	Parallel	C	C		P,T	P,T	C	C		C	P														
HOWARD INDUSTRIES	EPL3/32IS/MV/SC/HE	IS	3	L	0.78	Parallel	C	C		C	C	C	C		C	C	C	C		C	C		C	C		C	C		C	C
HOWARD INDUSTRIES	EP4/32IS/MV/MC/HE	IS	4	N	0.88	Parallel	C	C		C	P,F	C	C		P,F	C	C	C		P,F	C	C		C	P,F					
HOWARD INDUSTRIES	EP2/32IS/MV/MC/HE	IS	2	N	0.89	Parallel	C	C		C	C	C	C		C	C														
HOWARD INDUSTRIES	EP3/32IS/MV/MC/HE	IS	3	N	0.88	Parallel	C	C		C	P	C	C		C	C	C	C		C	C		C	C		C	C		C	C
KEYSTONE	KTEB-232-UV-IS-N-P	IS	2	N	0.87	Parallel	C	C		C	C	C	C		C	C														
KEYSTONE	KTEB-432RIS-1-TP-SL	IS	4	N	0.80	Parallel	P,T	P,T	P,T			P,T	P,T	P,T			P,T	P,T	P,T			P,T	P,T	P,T						

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- N Acoustic noise >20dB S Can't start-up

- T THD >30% C compatible

Ballast Brand	Part Number	Start Method	# of Lamps	BF		Lamp Connection	1-Lamp				2-Lamp				3-Lamp				4-Lamp							
				Type	Value		108Vac	120Vac	132Vac	277Vac	305Vac	108Vac	120Vac	132Vac	277Vac	305Vac	108Vac	120Vac	132Vac	277Vac	305Vac	108Vac	120Vac	132Vac	277Vac	305Vac
				KEYSTONE	KTEB-332-UV-IS-N-P		IS	3	N	0.87	Parallel	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
KEYSTONE	KTEB-432-UV-IS-N-P	IS	4	N	0.87	Parallel	C	C	P	P	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
KEYSTONE	KTEB-2C72-1-TP	PS	1	N	0.97	Parallel	S	S	S	S	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
LumaPro	4KGH1 EB-432IS-120	IS	4	N	0.87	Parallel	C	C	P,F	C	C	C	P,F	C	C	C	P,F	C	C	C	C	C	C	C	P,F	C
MAXLITE	SKEU322HEL/SC	IS	2	L	0.77	Parallel	C	C	C	P,F	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
MAXLITE	SKEU324HE/SC	IS	4	N	0.88	Parallel	C	C	C	P,F	C	C	C	P,F	C	C	C	P,F	C	C	C	C	C	C	C	P,F
MAXLITE	SKEU323L/SC	IS	3	N	0.78	Parallel	C	C	C	P	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
MAXLITE	MLEU322HEL/SC	IS	2	L	0.83	Parallel	C	C	P	P	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
MAXLITE	MLEU323H/SC	IS	3	H	1.18	Parallel	C	C	C	P	C	C	C	P	C	C	C	C	C	C	C	C	C	C	C	C
MAXLITE	MLEU324HE/SC	IS	4	N	0.88	Parallel	C	C	P	P,T	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
OSRAM SYLVANIA	QTP 2X32T8/UNV ISN-SC L	IS	2	N	0.88	Parallel	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
OSRAM SYLVANIA	QHE 2X32T8/UNV ISN-SC L	IS	2	N	0.88	Parallel	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
OSRAM SYLVANIA	QHE 2X32T8/UNV ISL-SC L	IS	2	L	0.78	Parallel	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
OSRAM SYLVANIA	QHE 3X32T8/UNV ISH-SC	IS	3	H	1.18	Parallel	C	C	C	T	C	C	T	T	C	C	C	C	C	C	C	C	C	C	C	C
OSRAM SYLVANIA	QHE 4X32T8/UNV ISN-SC L	IS	4	N	0.88	Parallel	C	C	C	P,T	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
OSRAM SYLVANIA	QHE 4X32T8/UNV ISL-SC L	IS	4	L	0.78	Parallel	C	C	C	P,T	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
OSRAM SYLVANIA	QTP 4x32T8/UNV ISN-SC	IS	4	N	0.88	Parallel	C	C	P,T,F	P,T	C	C	P,T	P,T	C	C	T	P,T	C	C	C	C	T	T	C	C
OSRAM SYLVANIA	QHE 1X32T8/UNV ISN-SC	IS	1	N	0.88	n.a	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
OSRAM SYLVANIA	QHE 1X32T8/UNV ISL-SC	IS	1	L	0.78	n.a	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
OSRAM SYLVANIA	QTP 1X32T8/UNV ISN-SC	IS	1	N	0.88	n.a	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
OSRAM SYLVANIA	QHE 2X32T8/UNV ISH-SC	IS	2	H	1.20	Parallel	C	C	P,F	P,T	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
OSRAM SYLVANIA	QTP 3X32T8/UNV ISN-SC	IS	3	N	0.88	Parallel	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
OSRAM SYLVANIA	QHE 3X32T8/UNV ISN-SC	IS	3	N	0.88	Parallel	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
OSRAM SYLVANIA	QHE 3X32T8/UNV ISL-SC	IS	3	L	0.78	Parallel	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
OSRAM SYLVANIA	QHE 4X32T8/UNV PSX-SC	PRS	4	L	0.71	Parallel	C	C	C	P,T	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
OSRAM SYLVANIA	QHE 2X32T8/UNV PSH-HT	PRS	2	H	1.18	Parallel	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
OSRAM SYLVANIA	QHE 2X32T8/UNV PSN-MC	PRS	2	N	0.88	Parallel	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
OSRAM SYLVANIA	QHE 3X32T8/UNV PSN-SC	PRS	3	N	0.88	Parallel	C	C	P	P	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
OSRAM SYLVANIA	QTP 3X32T8/UNV PSX-SC	PRS	3	L	0.71	Series	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
OSRAM SYLVANIA	QTP3X32T8/UNV PSN-SC	PRS	3	N	0.88	Series	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
OSRAM SYLVANIA	QHE 4X32T8/UNV PSN-SC	PRS	4	N	0.88	Parallel	C	C	P	P	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
OSRAM SYLVANIA	QHE 2X32T8/UNV DIM-TC	PRS	2	N	0.88	Series	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
PES	PES120ET8-12SMT-4	IS	4	N	0.88	?	S	S	S	C	S	S	S	C	S	S	S	C	S	S	S	C	S	S	S	C
PES	PES120DET8-12SMT	PS	2	N	0.95	Parallel	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Philips-Advance	ICN-2P32-N	IS	2	N	0.89	Parallel	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Philips-Advance	IOPA-2P32-N	IS	2	N	0.89	Parallel	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Philips-Advance	IOP-2P32-N	IS	2	N	0.89	Parallel	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Philips-Advance	IOP-2P32-LW-N	IS	2	L	0.77	Parallel	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Philips-Advance	IOPA-3P32-LW-N	IS	3	L	0.76	Parallel	C	C	P	P,T	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Philips-Advance	IOPA-4P32-N	IS	4	N	0.87	Parallel	N	N	P,T,N	P,T,N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Philips-Advance	IOPA-4P32-HL-SC	IS	4	H	1.18	Parallel	C	C	C	F,P	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Philips-Advance	IOP-4P32-N	IS	4	N	0.87	Parallel	C	C	C	P,T	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Philips-Advance	IOP-4P32-LW-N	IS	4	L	0.77	Parallel	C	C	T	P,T	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Philips-Advance	ICN-4P32-N	IS	4	N	0.90	Parallel	C	C	T	P,T	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Philips-Advance	IOP-1P32-N	IS	1	N	0.89	n.a	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Philips-Advance	ICN-1P32-N	IS	1	N	0.91	n.a	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Philips-Advance	IOPA-1P32-N	IS	1	N	0.88	n.a	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Philips-Advance	IOPA-2P32HL-SC	IS	2	H	1.18	Parallel	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Philips-Advance	IOPA-3P32-N	IS	3	N	0.86	Parallel	N	N	P,N	P,N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Philips-Advance	IOP-3P32-N	IS	3	N	0.87	Parallel	N	N	P,N	P,N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Philips-Advance	REB-4P32-SC	IS	4	N	0.81	Parallel	P,T	P,T	P,T	C	P,T	P,T	P,T	P,T	P,T	P,T	P,T	P,T	P,T	P,T	P,T	P,T	P,T	P,T	P,T	P,T
Philips-Advance	IOP-4P32-HL-SC	IS	4	H	1.18	Parallel	C	C	F	F	C	C	C	F	F	F	F	F	C	C	C	C	C	C	C	C
Philips-Advance	ICN-4P32-SC	IS	4	N	0.89	Parallel	C	C	C	P	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Philips-Advance	ICN-3P32-N	IS	3	N	0.88	Parallel	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Philips-Advance	IOP-2PSP32-N	PS	2	N	0.94	Parallel	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Philips-Advance	IOP-3PSP32-SC	PS	3	N	0.88	Parallel	C	C	P	P	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Philips-Advance	IOP-3PSP32-LW-SC	PS	3	L	0.69	Parallel	C	C	P	P,T	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Philips-Advance	IOP-4PSP32-SC	PS	4	N	0.89	Parallel	C	C	P,T	P,T	C	C	C	C	C	T	C	C	C	C	C	C	C	C	C	C
Philips-Advance	IOP-4PSP32-LW-SC	PS	4	L	0.69	Parallel	C	C	C	P,T	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Philips-Advance	IOP-2S32-SC	PS	2	N	0.87	Series	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Philips-Advance	IZT-2S32-SC	DPS	2	N	1.00	Series	S	S	S	S	C	C	C	C	C	F	C	C	C	C	C	C	C	C	C	C

