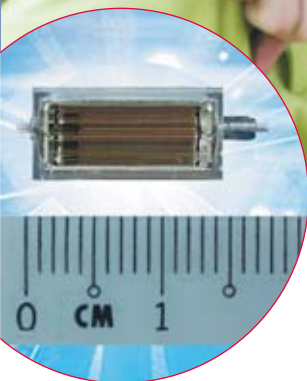
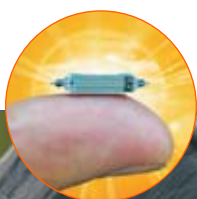


Trim Xe™

Xenon Flash by PerkinElmer



Delivering the world's best photographic image quality to digital and mobile phone cameras

Trim Xe™

Xenon Flash

the choice for today's slim, trim mobile phones

PerkinElmer, the global leader in Xenon Flash lamps for the consumer and professional camera industry, is pleased to announce the latest technology advancement in photographic imaging solutions, the new Trim Xe™ family of Xenon Flash products. PerkinElmer's Trim Xe line is the light source of choice for today's mobile phone cameras (MPC).

PerkinElmer has been providing Xenon Flash lamps to the Film and Digital Still Camera (DSC) industry for over 20 years. Film and DSC cameramakers worldwide incorporate Xenon Flash into virtually all of their cameras with flash and know that Xenon Flash is a key to achieving the high quality photographs that consumers have come to expect and rely upon.

Now with the debut of PerkinElmer's newest Xenon Flash product family—the Trim Xe—handset manufacturers and consumers no longer have to settle for an inferior LED light source in their mobile phone cameras. Designing with PerkinElmer's new generation of Xenon Flash, they can get the same photographic image quality as in DSCs.

PerkinElmer's Trim Xe product family provides numerous advantages over LED “flash” as well as prior generation Xenon products. These advantages include providing 1000x–2000x greater light output (Lux.s) than the highest output LEDs in photographic applications, 100–150 times faster shutter speed capability, and a dramatic 35% reduction in module size over prior generation Xenon products.

The Advantages of the Trim Xe Product Family include:

- **1000x–2000x Brighter (Lux.s) than the brightest LEDs** (@ 200 μ S pulse width; 2.0 m distance)—illuminates targets at a longer distance
- **100-150x Faster shutter speeds compared with LED “flash”**
- **Delivers great user experience in MPCs** without that awful squinting
- **Freezes motion**—less blur and better action detail
- **Sharp, bright, clear, crisp, and colorful photos**—even in dim-light conditions
- **Same great image quality as in DSCs**
- **Image quality worthy of transmitting, storing and printing**
- **Accurate color temperature** —close to natural daylight
- **Require no “band-aids”** such as brightness/contrast/color correction and image stabilization software
- **35% Smaller than prior generation Xenon flash modules**—perfect for today's trim and ultra slim mobile phones.
- **Available in range of lamp diameters** including 1.8 mm, 1.5 mm, and 1.3 mm with 1.0 mm available soon.
- **2x Longer life**—now 10,000 flashes @320 V/40 μ F
- **Higher LOP efficiency**—LOP drop over life < 10%



Xenon Flash — Trim Xe*

Flash duration: 200 μ s (1/5000 sec)
Note the stopped motion of the fan
Color balance is close to daylight

* 28 μ F; distance of 2 m



LED at 1000 mA*

Exposure time: 1/10th sec.
(Typical MPC exposure)
Unacceptable lighting

* Distance of 2 m



LED at 1000 mA*

Exposure time: 2 sec.
(Minimum for acceptable exposure)
Color balance is very yellow.
Note the blurred action of the fan.

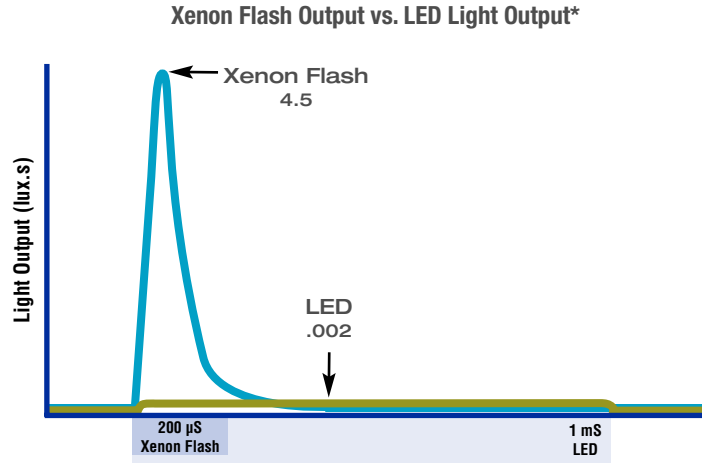
* Distance of 2 m

when it comes to photography

there is no substitute for Xenon

“The size and cost constraints placed on camera modules for mobile phones—especially the current crop of super slim fashion phones—means those tiny cameras are typically starved for light. Xenon Flash modules are a welcome addition and should provide a real boost to mobile photography.”

Tony Henning
Senior Analyst for Mobile Imaging, Future Image



* At 28 µF; distance of 2 m

Trim Xe Xenon Flash vs. LED Light Output Comparison

Distance	Light Source	Peak luminance (lux)	1 ms	1/60th second
			(Freeze Motion)	(DSC flash sync speed)
			Light output (lux.s)	Light output (lux.s)
0.5 m	Trim Xe Xenon Flash (28 uF)	350000	70	70
	MPC LED* (~350 mA)	60	0.035	0.58
	LED (1000 mA) Measured outside MPC**	171	0.092	1.53
1.0 m	Trim Xe Xenon Flash (28 uF)	90000	18	18
	MPC LED* (~350 mA)	15	0.009	0.15
	LED (1000 mA) Measured outside MPC**	43	0.023	0.39
1.5 m	Trim Xe Xenon Flash (28 uF)	40000	8	8
	MPC LED* (~350 mA)	6.8	0.004	0.068
	LED (1000 mA) Measured outside MPC**	20	0.011	0.175
2.0 m	Trim Xe Xenon Flash (28 uF)	22500	4.5	4.5
	MPC LED* (~350 mA)	3.7	0.002	0.036
	LED (1000 mA) Measured outside MPC**	11.25	0.0059	0.1

* Single die LED in mobile phone with beam shaping optics
** LED mounted on Linear Tech demo board

Trim Xe™

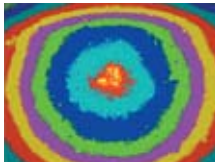
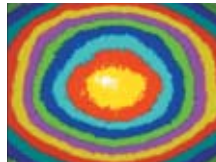
Xenon Flash by PerkinElmer



Trim Xe 1.5 FTA



Trim Xe 1.3 FTA

FTA type	RF151012+BGDD 0010 PKI6700P(H)	RF131011 +1.3 mm tube
Charging voltage (V)	250 – 320	250 – 320
Flash capacitor range (µF)	20 – 40 µF	20 – 40 µF
Input energy range (Ws)	1.0 – 2.05	1.0 – 2.05
Output (Lux.s) at distance of 1 m	13.5 – 37	13.5 – 37
G.N. range (@ ISO100)	2.6 – 4.3	2.6 – 4.3
Distribution (AOV: 54 X 42)	Diagonal: 50%	Diagonal: 45%
		
Minimum FTA size Height/Width/Length (mm)	2.9/3.3/12.2	2.7/3.1/12.5
FTA volume (mm³)	116.7	104.6
Life	10,000 @ 320 V/40 µF	10,000 @ 320 V/40 µF
Triggerability (V)	250	250
I Peak (A)	140	140
Arc Length (mm)	9.5	9.7
LOP drop over life	< 10%	< 10%
Lamp diameter ID/OD (mm/mm)	1.0/1.5	0.9/1.3

For the New Trim Xe Xenon Flash

Call us and put PerkinElmer's expertise in Xenon Flash technology to work in your mobile imaging solutions. Why settle for an inferior LED illumination source in your mobile phone cameras? Let us show you how designing with Xenon Flash by PerkinElmer will help you deliver the world's best photographic image quality to today's mobile phone cameras—and tomorrow's.



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