

# PERFORMANCE

*graphite*

HDMI • DIGITAL OPTICAL • AUDIO • AUDIO J2P



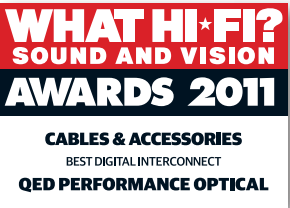
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In addition to the distinctive graphite livery, every QED Performance Graphite cable benefits from the latest research conducted in the QED laboratories. The QED top-down design philosophy ensures that all Performance cables take advantage of the design DNA seen in the flagship Signature range and the high-end Reference range.

And of course, all QED cables are carefully and subjectively reviewed by a panel of 'golden ears' to ensure that the laboratory measurements deliver results in real world use.

## QED Performance Graphite HDMI



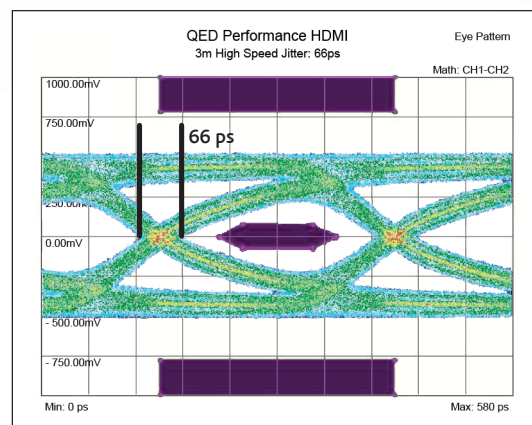
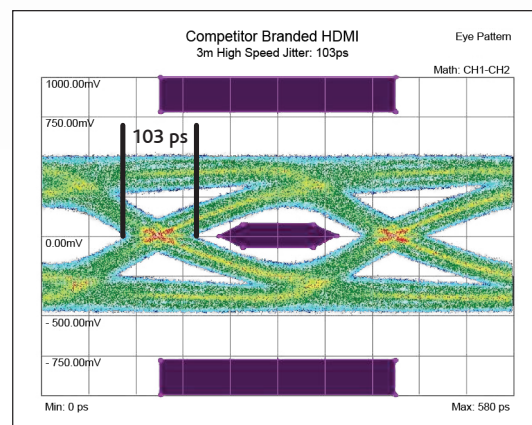
This is the latest incarnation of the acclaimed 'five star' classic QED HDMI-P, which has benefitted hugely from the application of design secrets uncovered by the QED HDMI test suite. As the only UK manufacturer with the ability to test HDMI cable designs beyond the scope of the HDMI 1.4 specification\*, QED is uniquely placed to evaluate new technical ideas before proceeding with production.

QED has identified cable induced timing error, termed jitter, as one of the key differentiators between satisfactory and outstanding cables. Because QED customers demand better, the objective has been to reduce jitter to the absolute minimum possible.

The eye diagrams below are used to verify that an HDMI cable design meets the minimum criteria to qualify for the official HDMI logo. If the waveform does not enter the purple mask area then the cable is a PASS.

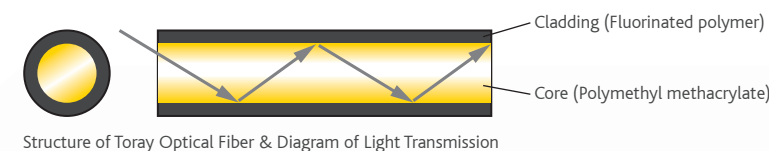
The eye diagram on the left demonstrates that a 3m competitor cable tested at High Speed narrowly passes the test and exhibits up to 103 pico seconds (ps) of jitter; enough to allow bit errors into the video signal.

The eye diagram on the right shows a 3m QED Performance Graphite cable tested at the same speed. The eye is much more open showing superior headroom compared with the competitor cable. Jitter is reduced to just 66ps in this design which significantly reduces the incidence of bit errors reaching the TV, therefore maximising the audio and video data transfer from the Home Cinema equipment.



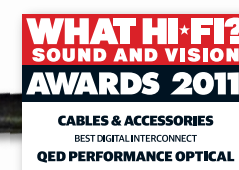
The above measurements were taken using QED's own laboratory test equipment. QED is the only UK cable manufacturer with this invaluable facility.\*

## QED Performance Graphite Optical



The award winning Performance Graphite Optical cable features an all new PMMA acrylic glass optical fibre previously only available in the Reference range products. The new fibre has half the signal attenuation per metre of its predecessor, allowing it to comfortably transmit the high bandwidth signals (up to 11MHz) demanded by today's multi-channel digital audio links.

The cable features a stepped refractive index core that minimises light absorption and modal dispersion of single mode optical signals at the fibre boundary. Precision cladding techniques create a marked decrease in refractive index at the fibre boundary, which changes the angle of incidence of the light beam so that more is reflected back inside the fibre. This all makes for decreased jitter and cleaner audio data transmission.



**OPTICAL graphite**  
Higher bandwidth, lower attenuation

## QED Performance Graphite Audio



The graphite range sees the return of the classic figure 8 (∞) stereo analog audio cable to the Performance line-up, last seen in the popular Qunex range.

QED Performance Audio Graphite has an all new plug design featuring a gold plated six leaf ground ring and split central signal pin. The cable construction uses a pseudo-balanced twisted pair and electrostatic shield arrangement found across the QED cable range.

The geometry takes advantage of a certain level of common mode rejection available from the signal send and return conductors being twisted together so that they occupy the same electrical space. Any noise signals in the environment especially those caused by external high currents (mains cables etc) largely affect both conductors equally resulting in a net rejection of the noise signal itself. Added to this is an electrostatic shield braid that is connected to the audio signal 0V reference (at the source end) which effectively neutralises noise signals caused by external high voltages (light switches, static discharge etc). In this way the tiny analog audio signal that is so vulnerable to external noise signals is protected on its journey from source to amplifier.

**AUDIO graphite**  
Clarity of sound through noise immunity

### HDMI

QE3100	0.6m
QE3101	1.0m
QE3102	2.0m
QE3103	3.0m
QE3105	5.0m

### Digital Optical

QE3010	1.0m
QE3012	2.0m
QE3013	3.0m
QE3014	5.0m
QE3015	10.0m

### Audio

QE2202	0.6m
QE2203	1.0m
QE2204	3.0m
QE2205	5.0m

### Audio J2P

QE3001	1.5m
QE3002	3.0m