Luminescence Technology Corp.

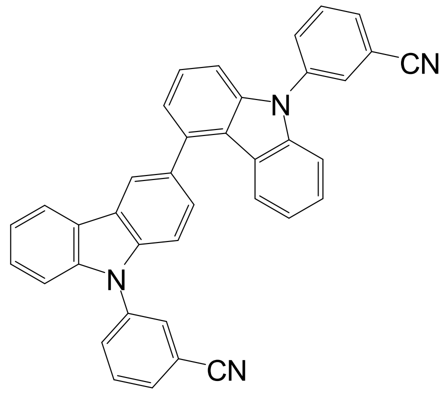
Engineering of Interconnect Position of Bicarbazole for High EQE in Green and Blue PHOLEDs

Product Specifications

LT-N4119 3CN34BCz 3,3'-(9*H*,9'*H*-3,4'-bicarbazole-9,9'-diyl)dibenzonitrile

CAS No.	1622297-83-9
Grade	Sublimed, >99 % (HPLC)
Formula	$C_{38}H_{22}N_4$
Molecular Weight	534.61 g/mole
Photoluminescence	404 nm (in CH_2Cl_2)
Tg	132 °C
TGA	> 260 °C (0.5 % weight loss)
Triplet Energy	2.98 eV

Reference : ACS Appl. Mater. Interfaces 2014, 6, 14874–14880



Features

- The bicarbazole 3CN34BCz host material showed good device performance and high quantum efficiency above 25% for green and blue PHOLEDs.
- The bicarbazole host material with a linkage via 4-position showed highest quantum efficiency upon 30.4% in the green device, and increased the IP-EA gap and triplet energy of the host material, and reduced current density of the device.

Device Application

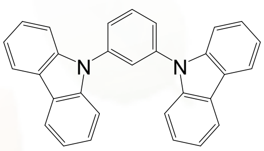
The Best Green Device :

ITO/ PEDOT:PSS (60 nm)/ TAPC (20 nm)/ MCP (10 nm)/ fac-Ir(ppy)$_3$: 3CN34BCz (5 wt%, 25 nm)/ TSPO1 (35 nm)/ LiF (1 nm)/ Al (200 nm).

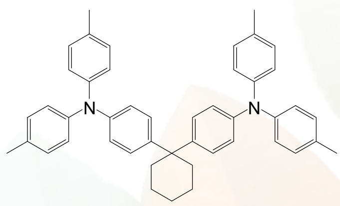
The Best Blue Device :

ITO/ PEDOT:PSS (60 nm)/ TAPC (20 nm)/ MCP (10 nm)/ FIrPic: 3CN34BCz (5 wt%, 25 nm)/ TSPO1 (35 nm)/ LiF (1 nm)/ Al (200 nm).

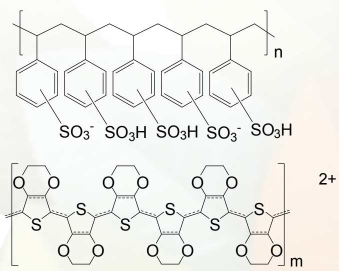
Related products from Lumtec :



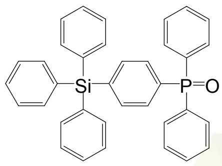
LT-E107 mCP



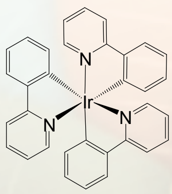
LT-N137 TAPC



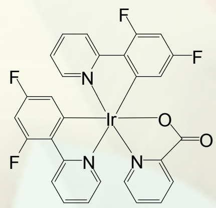
LT-PS001 PEDOT:PSS



LT-N4048 TSPO1



LT-E504 fac-Ir(ppy)$_3$



LT-E607 FIrPic

Our products are used for testing and research purpose; they are not guaranteed in patent contention by customer use.

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