LUNDAHL
– TRANSFORMERS –

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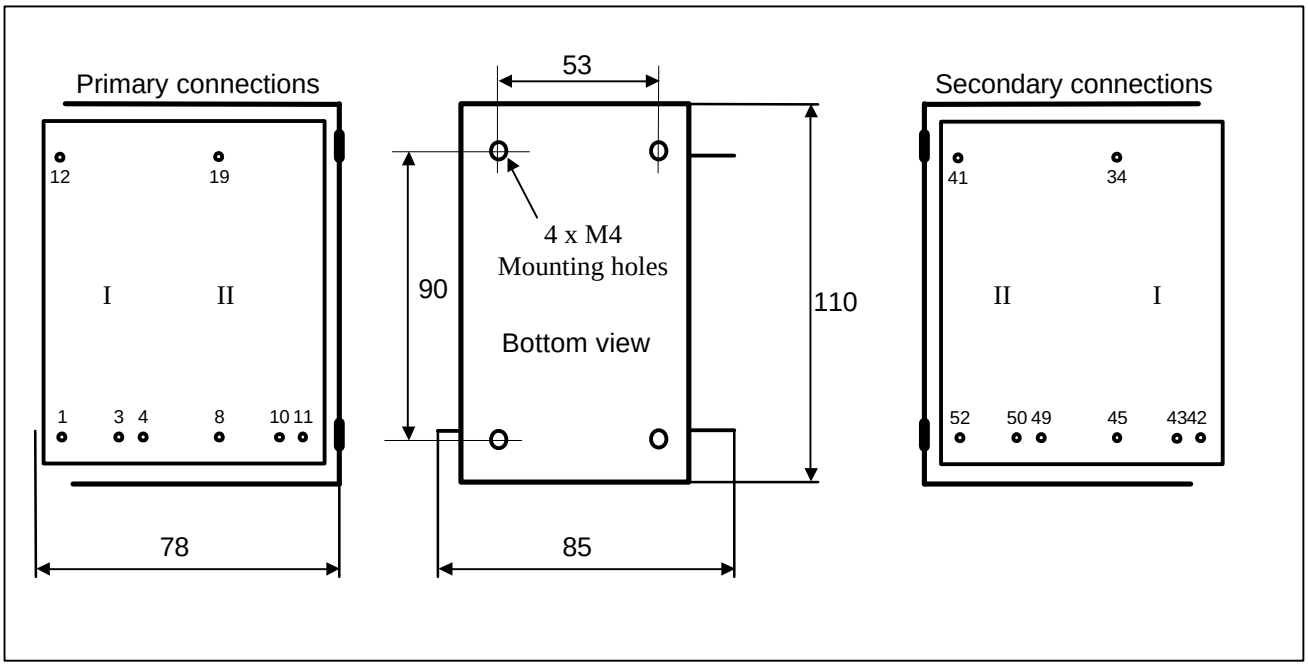
Tube Amplifier Output Transformers
LL1679

LL1679 is an output transformer for tube amplifiers, available with different core air-gaps for different types of output stages. The transformers are highly sectioned with harmonically sized sections, which results in a minimum leakage inductance. This combined with a low capacitance coil winding technique results in a wide frequency range.
The primary winding can be tapped for 36% UL connection.
The transformers have a special audio C-core of our own production.
The transformers are unpotted, open frame type suitable for mounting inside an amplifier housing.

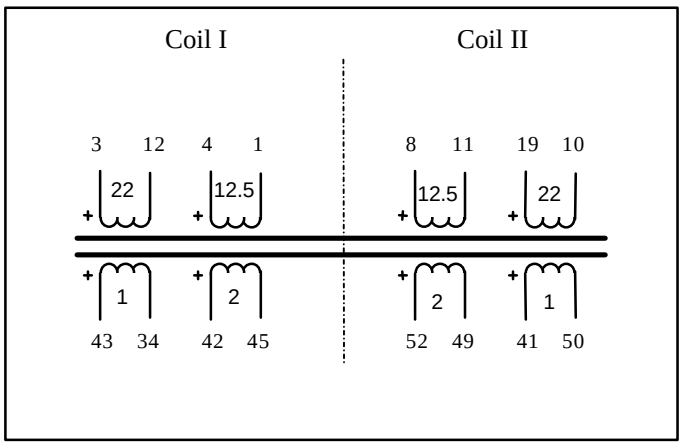
Physical dimensions, pin and mounting hole layout LL1679 (all dimensions in mm)



R031029

Pin spacing module:	5.08 mm (0.2")
Row spacing:	76mm approx.
Weight:	2.5 kg
Turns ratio:	22 + 12.5 + 22 + 12.5 : 2 + 1 + 2 + 1

Winding schematics:



	LL1679	
Turns ratio:	**22 + 12.5 + 22 + 12.5 : 2 + 1 + 2 + 1**	
Static resistance of primary (all in series)	160 Ω (2 x 54Ω + 2 x 26Ω)	
Static resistance of inner/outer secondary winding	0.5Ω / 0.3Ω	
Primary leakage inductance (all in series)	8 mH	
Max. primary signal voltage r.m.s. at 30 Hz (all in series)	Push-Pull 670V	Single End 295V

Isolation between primary and secondary windings / between windings and core: 3 kV / 1.5 kV

Electrical characteristics

Primary Load Impedance, Max power and power loss.

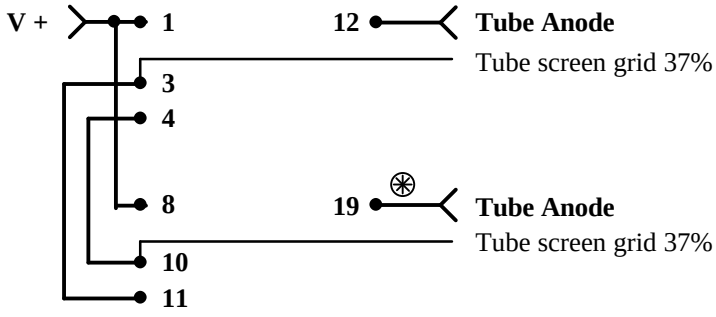
	Sec. connection for 4/8/16 W (See next page)		
	-/B/C	B/C/D	C/D/E
	Primary Load Impedance (transformer copper resistance included)		
LL1679	9.7 kΩ	4.5 kΩ	2.6 kΩ
	Power and Loss		
Max. Power, P-P at 30 Hz	45W	105W	188W
Max. Power, S.E. at 30 Hz	9W	20W	36W
Power loss across transformer	0.2 dB	0.4 dB	0.6 dB

Primary DC Current Core Air-gap and Primary inductance

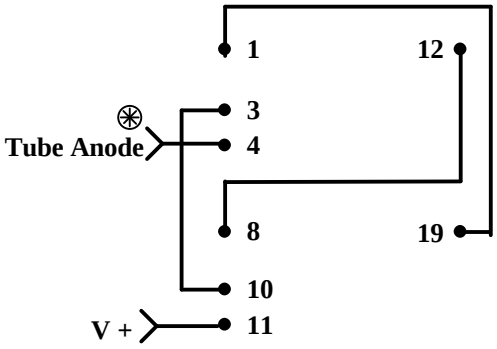
	LL1679/PP	LL1679/70mA
Core Airgap (delta/2)	25 µ	190 µ
Single end standing current for 0.9 Tesla (recommended operating point)		70mA
Primary inductance	150 H	40H

Frequency response, LL1679/PP 10 Hz – 70 kHz +0/-3 dB
(source impedance 2k, load impedance 10 ohms
primary winding is series, secondary winding alt. C)

Primary connections, Push-Pull

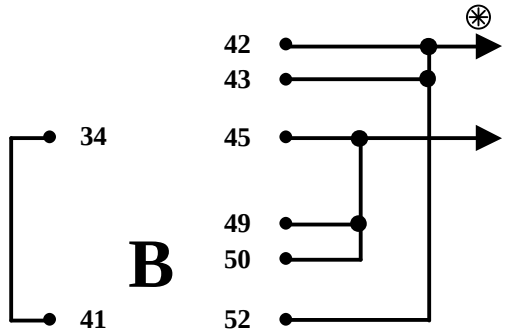


Primary connections, Single End

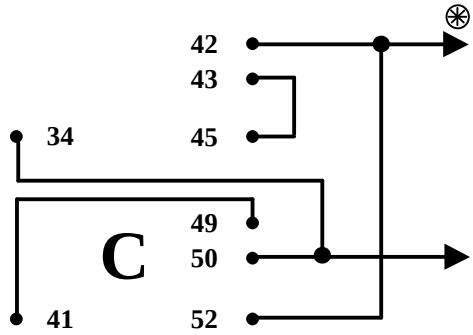


Secondary connections

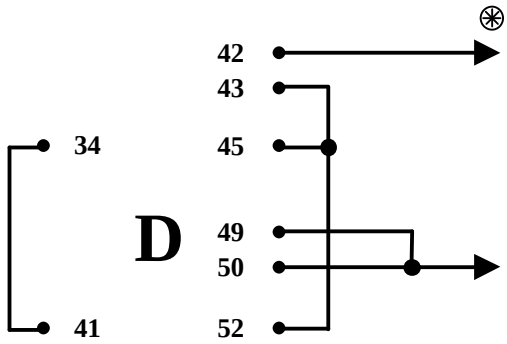
⊛ Indicates phase



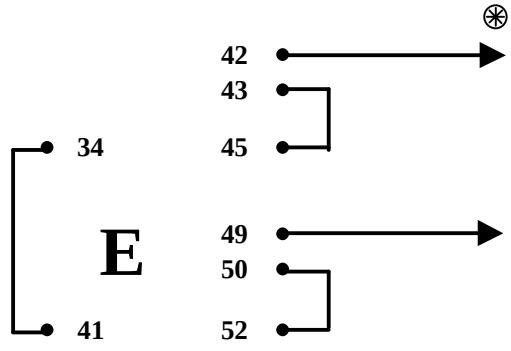
Max secondary Voltage RMS @ 30 Hz	
P-P: 19V	SE : 8.5V
Sec. copper resistance 0.2 Ω	Windings in series 2



Max secondary Voltage RMS @ 30 Hz	
P-P: 29V	SE : 13V
Sec. copper resistance 0.4 Ω	Windings in series 3



Max secondary Voltage RMS @ 30 Hz	
P-P: 39V	SE : 17V
Sec. copper resistance 0.7 Ω	Windings in series 4



Max secondary Voltage RMS @ 30 Hz	
P-P: 58V	SE : 25V
Sec. copper resistance 1.6 Ω	Windings in series 6