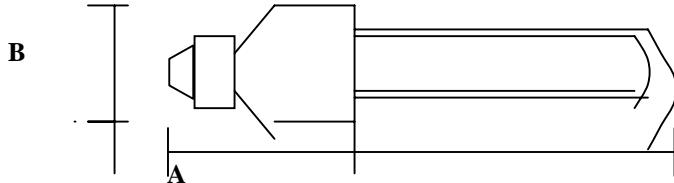


SPECIFICATION

TYPE: THREE BAND COMPACT SELF-BALLASTED FLUORESCENT LAMP

ITEM	FTR 20 EX
RATED LAMP POWER	20 W
INPUT VOLTAGE	120 V
FREQUENCY	60 Hz
LAMP CURRENT	0.140 A
LAMP COLOR TEMPERATURE	6000K
COLOR REND INDEX Ra	81 %
BASE	E 27
DIMENSION A	145mm
DIMENSION B	60mm



OPERATING MANUAL

• LIGHTING PRINCIPLE

BALLAST MAKES INPUT AC POWER CHANGED INTO DC AND PULSE SHAPED DC POWER LIGHT FLUORESCENT LAMP, OPERATING A SWITCHING ELEMENT BY L C RESONANCE FREQUENCY.

BALLAST CIRCUIT MANUAL

1) POWER INPUT
AC. 120V / 60Hz RATED VOLTAGE, FUSE

2) FULL WAVE RECTIFICATION BRIDGE CIRCUIT HAS 4 DIODES (D1 - D4) CHANGES AC 120V INTO DC 155V

3) SMOOTHING CIRCUIT

2 μ H INDUCTOR 33 μ F CAPACITOR ARE COMPONENTS
REMOVES NOISE AND RIPPLES OF DC POWER.

4) HYSTERESIS REDUCTION CIRCUIT

HALPS EXACT ON/OFF Q1 TRANSISTER ACCORDING TO
OSC RESONANCE AND CONTROLS ELECTRIC CURRENT INTO LAMP.
IF Q1 IS ON Q2 WILL BE OFF, Q2 ON, CONTINUOUSLY.

**5) WHEN POWER ON, DIAC ON, Q2 ON, Q1 OFF, PTC ON AND CATHODE
PREHEATED IN SEQUENC.**

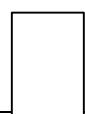
COMPLETION OF CATHODE PREHEATING MAKES PTC OFF
AUTOMATICALLY BY THERMAL SENSING OF PTC, AND THEN LAMP IS
LIGHTED BY Q1, Q2 OPERATION AS SECTION 4).

SYSTEM MAP

AC VOLTAGE INPUT PART



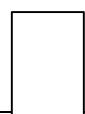
FULL WAVE RECTIFIER CIRCUIT



SMOOTHING CIRCUIT



HYSTERESIS REDUCTION CIRCUIT



LIGHTING PART