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1.

	Introduction; 4.2 Display Method of LCD and Power Reduction; 4.3 Principle of the Adaptive Dimming Technique 4.4 Adaptive Dimming Control and Power Consumption4.5 Other Features of the Adaptive Dimming Technique; References; 5: Notebook PC/Monitor Backlights; 5.1 Introduction; 5.2 Characteristics Required for Backlights; 5.3 Optical Systems for Backlights; 5.4 Light Sources for Backlights; 5.5 Optical Components of Backlights; References; 6: Backlights; 5.5 Optical Components of Backlights; References; 6: Backlights for Handheld Data Terminals; 6.1 Introduction; 6.2 Basic Structure and Principles of LED Backlights; 6.3 Constituents of LED BLUs; 6.4 Various LED Backlight Configurations; 6.5 Conclusions; References; Part Two: Light Source Devices 7: CCFL Backlights7.1 Introduction; 7.2 Structure and Operating Principle of CCFLs; 7.3 Basic Characteristics of CCFLs; 7.4 Future Trends in CCFLs; 7.5 Conclusions; 8: CCFL Inverters; 8.1 Introduction; 8.2 Various Drive Schemes of CCFL Inverters; 8.3 Equivalent Circuit of CCFLs; 8.4 Inverter Circuits; 8.5 Driving of CCFLs with Inverters; 8.6 Lamp Current Balancers for Driving Multiple Lamps; 8.7 Conclusions; References; 9: HCFL Backlights; 9.1 HCFL Light Source as a Member of the Fluorescent Lamp Family; 9.2 Introduction of the Hot Cathode in Fluorescent Lamps; 9.3 Driving the HCFL 9.4 Cathode Life Properties of HCFL9.5 Lumen Maintenance and Color Point Shift during Life; 9.6 Designing a Backlight with HCFL; 9.7 The Scanning Feature, Cost-effectively Enabled by HCFL; 9.8 The Dimming Feature; 9.9 Conclusions; References; 10: EEFL Backlights; 10.1 Introduction; 10.2 Basic Characteristics of EEFLs; 10.3 Advantages and Disadvantages of EEFL Backlights; 10.4 Technological Trends of EEFL Backlights; 10.5 Development Targets; 10.6 Conclusions; References; 11: FFL Backlights; 11.1 Introduction; 11.2 The History of FFL Development; 11.3 Characteristics of FFLs 11.4 Features of the FFL	
Sommario/riassunto	Research and development on liquid crystal display (LCD) backlight technologies are becoming increasingly important due to the fast growth of the LCD business. Backlight technologies contribute to functional improvements of LCDs in terms of wide colour reproduction, uniformity improvements of luminance and colour temperature, high luminance, long life, less power consumption, thinner backlight unit, as well as cost. As LCD panel technology progresses, the lighting technology that provides the illumination for the panel must similarly evolve. LCD Backlights is written by a global panel	