

A general overview of the market situation as well as lead times and prices



Analog

High-End: No major changes in pricing and lead time. **Commodities:** Lead times and prices remain stable.



	Lead Time (wk)	Price
Switched Voltage Regs	↔ 13-24	\leftrightarrow



	Lead Time (wk)	Price
Data Converters	↔ 6-20	\leftrightarrow
Interface	↔ 6-20	\leftrightarrow
Op Amps High End	↔ 6-20	\leftrightarrow
Switched Voltage Regs	↔ 6-28	\leftrightarrow

NSSH NBO

	Lead	d Time (wk)	Price
Op Amps Commodities	\leftrightarrow	12-16	\leftrightarrow
Op Amps High End	\leftrightarrow	12-16	\leftrightarrow
Switched Voltage Regs	\leftrightarrow	8-16	\leftrightarrow
Voltage Regulators	\leftrightarrow	8-16	\leftrightarrow



	Lead	d Time (wk)	Price
Interface	\leftrightarrow	13-24	\leftrightarrow
Op Amps High End	\leftrightarrow	15-28	\leftrightarrow

onsemi

	Lead Time (wk)	Price
Interface	↔ 14-24	\leftrightarrow
Op Amps Commodities	↔ 10-20	\leftrightarrow
Op Amps High End	↔ 12-22	\leftrightarrow
Switched Voltage Regs	↔ 12-40	\leftrightarrow
Voltage Regulators	↔ 12-42	\leftrightarrow

power integrations™

	Lead Time (wk)	Price
Switched Voltage Regs	↔ 8-20	\leftrightarrow



	Lead Time (wk)	Price
Data Converters	↔ 12-16	\leftrightarrow
Op Amps Commodities	↔ 12-16	\leftrightarrow
Switched Voltage Regs	↔ 12-16	\leftrightarrow
Voltage Regulators	↔ 12-16	\leftrightarrow



	Lead Time (wk)	Price
Data Converters	\leftrightarrow 20-24	\leftrightarrow
Interface	↔ 14-20	\leftrightarrow
Op Amps Commodities	\leftrightarrow 12-20	\leftrightarrow
Op Amps High End	↔ 14-28	\leftrightarrow
Switched Voltage Regs	↔ 14-26	\leftrightarrow
Voltage Regulators	↔ 13-22	\leftrightarrow



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Discretes

Prices remain stable. The lead times are still moderate but with an ecomomic upswing, they will increase rapidly. It is strongly recommended to place backlog to secure supply. **onsemi** has a general NCNR window for rolling 180 days but for a wide range of Commodities the re-schedule and cancellation window is reduced to 60 days (please see information in the PDF document).

amu osram

	Lead Time (wk)	Price
Sensors	↔ 16-37	\leftrightarrow

№ BROADCOM[®]

	Lead Time (wk)	Price
RF Devices	↔ 12-18	\leftrightarrow



	Lead Time (wk)	Price
Bi-polar Power	↔ 6-10	\leftrightarrow
IGBT	↔ 15-44	\leftrightarrow
Power MOSFETs	↔ 14-38	\leftrightarrow
Rectifiers	↔ 18-30	\leftrightarrow
RF Devices	↔ 10-14	\leftrightarrow
Sensors	↔ 14-39	\leftrightarrow
Small Signal	↔ 14-24	\leftrightarrow
Thyristors	↔ 18-32	\leftrightarrow

nexperia

	Lead Time (wk)	Price
Bi-polar Power	↔ 10-18	\leftrightarrow
Power MOSFETs	↔ 10-22	\leftrightarrow
Rectifiers	↔ 9-16	\leftrightarrow
Small Signal	↔ 9-20	\leftrightarrow
TVS/Protection	↔ 9-15	\leftrightarrow
Zener Diodes	↔ 9-18	\leftrightarrow



	Lead Time (wk)	Price
RF Devices	↔ 15-18	\leftrightarrow
Sensors	↔ 18-42	\leftrightarrow

onsemi

	Lead Time	(wk) Price
Bi-polar Power*	↔ 13-	21 ↔
IGBT	↔ 16-	40 ↔
Power MOSFETs	↔ 16-	36 ↔
Rectifiers	↔ 12-	30 ↔
Small Signal*	↔ 10-	29 ↔
TVS/Protection*	↔ 12-	23 ↔
Zener Diodes*	↔ 11-	26 ↔

^x 60 days re-schedule and cancellation window



	Lead Time (wk)	Price
Bi-polar Power	↔ 16-20	\leftrightarrow
IGBT	↔ 16-34	\leftrightarrow
Power MOSFETs	↔ 15-34	\leftrightarrow
Rectifiers	↔ 17-29	\leftrightarrow
Small Signal	↔ 16-27	\leftrightarrow
Thyristors	↔ 17-28	\leftrightarrow
TVS/Protection	↔ 16-29	\leftrightarrow



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	Lead Time (wk)	Price
Power MOSFETs	↔ 15-28	\leftrightarrow
Rectifiers	↔ 10-26	\leftrightarrow
Small Signal	↔ 14-24	\leftrightarrow
TVS/Protection	↔ 11-24	\leftrightarrow
Zener Diodes	↔ 14-20	\leftrightarrow

TOSHIBA

	Lead	Time (wk)	Price
Power MOSFETs	\leftrightarrow	18-38	\leftrightarrow



	Lead Time (wk)	Price
Power MOSFETs	↔ 11-32	\leftrightarrow
Rectifiers	↔ 11-28	\leftrightarrow
Small Signal	↔ 11-20	\leftrightarrow
Thyristors	↔ 14-24	\leftrightarrow
TVS/Protection	↔ 11-18	\leftrightarrow
Zener Diodes	↔ 10-16	\leftrightarrow



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Memory

ALL PRICE TENDENCIES ARE INDICATED IN USD

Please provide long-term demand on all technologies. Forecast/Order backlog is key for planning demand properly. **General situation:** Price and lead time levels highly depend on supplier and product technology. Trend of increasing price levels and lead times on the latest technologies, good availability of legacy technologies due to missing/reduced demand from industrial and automotive customers.

DRAM: Pricing and lead times increasing - impact on LPDDR4/DDR4 and newer technologies like DDR5/LPDDR5 - Legacy DRAM remain to have very solid availability. Unplanned upsides on newer technologies might be difficult to supply. **NAND Flash:** Availability dependent on supplier. Increasing prices and lead times especially on latest tech (SSDs). Unplanned upsides difficult to supply. **NOR Flash:** Prices and lead times flat - good availability on legacy devices. **SRAM:** Good availability - minor constraints on specific technologies.



	Lead Time (wk)	Price
Serial NOR Flash	↔ 24-36	\leftrightarrow
(i	nfineon	

	Lead Time (wk)	Price
FRAM	↔ 8-10	\leftrightarrow
nvSRAM	\leftrightarrow 10	\leftrightarrow
Parallel NOR Flash	↔ 8-10	\leftrightarrow
Serial NOR Flash	↔ 8-14	\leftrightarrow
SRAM Asynch.	↔ 8-10	\leftrightarrow
SRAM Synch.	↔ 10-12	\leftrightarrow

ISSI

	Lead Ti	me (wk)	Price
DDR/mobile DDR	\leftrightarrow	8-12	\leftrightarrow
DDR2/LPDDR2	\leftrightarrow	8-12	\leftrightarrow
DDR3/DDR3L	\leftrightarrow	8-12	\leftrightarrow
DDR4/LPDDR4	\leftrightarrow	6-16	\leftrightarrow
Managed NAND (eMMC, UFS)	\leftrightarrow	10-12	\leftrightarrow
NAND (SLC,MLC,TLC,3D)	\leftrightarrow	10-20	\leftrightarrow
Parallel NOR Flash	\leftrightarrow	12-16	\leftrightarrow
SDRAM/mobile SDRAM	\leftrightarrow	6-8	\leftrightarrow
Serial NOR Flash	\leftrightarrow	12-14	\leftrightarrow
SRAM Asynch.	\leftrightarrow	8-12	\leftrightarrow
SRAM Synch.	\leftrightarrow	8-12	\leftrightarrow

KIOXIA

	Lead Time (wk)	Price
Managed NAND (eMMC, UFS)	↔ 16-26	\leftrightarrow
NAND (SLC,MLC,TLC,3D)	↔ 16-52	\leftrightarrow
SSD	\leftrightarrow 8-12	\leftrightarrow



	Lead Time (wk)	Price
EEprom	↔ 5-52	\leftrightarrow
Eprom	↔ 5-52	\leftrightarrow
Serial NOR Flash	↔ 24-28	\leftrightarrow



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micron.

	Lead Time (wk) Price
DDR/mobile DDR	\leftrightarrow 12	\leftrightarrow
DDR2/LPDDR2	\leftrightarrow 12	\leftrightarrow
DDR3/DDR3L	\leftrightarrow 12	\leftrightarrow
DDR4/LPDDR4	↑ 20	↑
DDR5/LPDDR5	↑ 20	↑
Managed NAND (eMMC, UFS)	\leftrightarrow 20	\leftrightarrow
microSD	↑ 20	↑
NAND (SLC,MLC,TLC,3D)	\leftrightarrow 12	\leftrightarrow
Parallel NOR Flash	\leftrightarrow 12	\leftrightarrow
SDRAM/mobile SDRAM	\leftrightarrow 12	\leftrightarrow
Serial NOR Flash	\leftrightarrow 12	\leftrightarrow
SSD	↑ 20	↑

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	Lead Time (wk)	Price
EEprom	↔ 7-21	\leftrightarrow
Serial NOR Flash	↔ 16-20	\leftrightarrow

RENESAS

	Lead Time (wk)	Price
EEprom	↔ 8-12	\leftrightarrow
FIFO	↔ 16-20	\leftrightarrow
SRAM Asynch.	\leftrightarrow 20-24	\leftrightarrow
SRAM Multiport	↔ 16-20	\leftrightarrow
SRAM Synch.	\leftrightarrow 20-24	\leftrightarrow

SAMSUNG

	Lead Time (wk)	Price
DDR3/DDR3L	↔ 6-8	\leftrightarrow
DDR4/LPDDR4	↔ 6-8	\leftrightarrow
DDR5/LPDDR5	↔ 6-8	\leftrightarrow
Managed NAND (eMMC, UFS)	↔ 6-8	\leftrightarrow
SSD	↔ 6-8	1



	Lead Time (wk)	Price
EEprom	↔ 8-14	\leftrightarrow
NVRAM	↔ 8-16	\leftrightarrow



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Opto

LEDs

Overall good supply situation.

ams OSRAM:

Allocation on OSLON Compact PL Gen2 Tight supply on OSCONIQ P3737.

amu osram

	Lead Tir	me (wk)	Price
LEDs High Power ^{x1}	\leftrightarrow	10-14	\leftrightarrow
LEDs High Power General Lighting	\leftrightarrow	10-14	\leftrightarrow
LEDs Infrared	\leftrightarrow	12-18	\leftrightarrow
LEDs Low/Mid Power	\leftrightarrow	10-28	\leftrightarrow
LEDs Low/Mid Power General Lighting	\leftrightarrow	10-12	\leftrightarrow
LEDs Ultraviolet	\leftrightarrow	6-8	\leftrightarrow

x¹ Allocation OSLON Compact PL Gen2 (KW CELNM2.TK, KW2 CFLNM2. TK, KW3 CGLNM2.TK, KY CELNM2.FY); Tight supply on OSCONIQ P3737 (GW PUSRA1.xM, GW PUSTA1.xM)



ι	ead Tir	ne (wk)	Price
LED Driver	\leftrightarrow	10-12	\leftrightarrow
LEDs High Power General Lighting	\leftrightarrow	4-6	\leftrightarrow
LEDs Low/Mid Power General Lighting	\leftrightarrow	6-8	\leftrightarrow

● BROADCOM

	Lead Tir	ne (wk)	Price
Coupler	\leftrightarrow	8-36	\leftrightarrow
LEDs High Power	\leftrightarrow	12-14	\leftrightarrow
LEDs Low/Mid Power	\leftrightarrow	12-14	\leftrightarrow

Coupler:

Overall good supply situation.

Vishay:

Lead time 4-16 weeks for majority of the Optocoupler portfolio.

EVERLIGHT

	Lead Time (wk)	Price
Coupler	\leftrightarrow 12-30	\leftrightarrow
LEDs High Power	↔ 12-14	\leftrightarrow
LEDs Infrared	↔ 6-24	\leftrightarrow
LEDs Low/Mid Power	↔ 12-14	\leftrightarrow
LEDs Ultraviolet	↔ 6-20	\leftrightarrow

inventronics

	Lead Time (wk)	Price
LED Driver	↔ 12-14	\leftrightarrow
LED Module	↔ 12-14	\leftrightarrow

LEDil[®]

	Lead Time (wk)	Price
LED Optic	↔ 6-8	\leftrightarrow

ELUMINUS

	Lead Tim	e (wk)	Price
LEDs High Power	\leftrightarrow	6-10	\leftrightarrow
LEDs High Power General Lighting	\leftrightarrow	6-8	\leftrightarrow
LEDs Infrared	\leftrightarrow	6-12	\leftrightarrow
LEDs Low/Mid Power General Lighting	\leftrightarrow	6-8	\leftrightarrow
LEDs Ultraviolet	\leftrightarrow	6-8	\leftrightarrow

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	Lead Time (wk)	Price
Coupler	↔ 6-26	\leftrightarrow



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Opto

LEDs

Overall good supply situation.

ams OSRAM:

Allocation on OSLON Compact PL Gen2 Tight supply on OSCONIQ P3737.

RENESAS

	Lead Time (wk)	Price
Coupler	↔ 18-20	\leftrightarrow

SAMSUNG

	Lead Time (wk)	Price
LEDs High Power	↔ 8-10	\leftrightarrow
LEDs High Power General Lighting	↔ 8-10	\leftrightarrow
LEDs Low/Mid Power	↔ 8-10	\leftrightarrow
LEDs Low/Mid Power General Lighting	↔ 8-10	\leftrightarrow
LEDs Module	↔ 12-16	\leftrightarrow

TOSHIBA

	Lead Time (wk)	Price
Coupler	\leftrightarrow 12-40	\leftrightarrow

Coupler:

Overall good supply situation.

Vishay:

Lead time 4-16 weeks for majority of the Optocoupler portfolio.



	Lead Time (wk)	Price
Coupler	↔ 4-46	\leftrightarrow
LEDs High Power	↔ 12-14	\leftrightarrow
LEDs Infrared	↔ 6-24	\leftrightarrow
LEDs Low/Mid Power	↔ 12-14	\leftrightarrow
LEDs Ultraviolet	↔ 6-20	\leftrightarrow





MCU & DSP





(infineon

	Lead Time (wk)	Price
8 Bit	↔ 16-26	\leftrightarrow
16 Bit	↔ 16-20	\leftrightarrow
32 Bit	↔ 10-26	\downarrow



	Lead Time (wk)	Price
8 Bit AVR	↓ 4-8	\leftrightarrow
8 Bit PIC	↓ 4-8	\leftrightarrow
16 Bit	↓↓ 4-8	\leftrightarrow
32 Bit	↔ 4-12	\leftrightarrow



	Lead Time (wk)	Price
8 Bit	↓ 16-20	\leftrightarrow
16 Bit	↓ 16-20	\leftrightarrow
32 Bit	↓ 16-20	\leftrightarrow
i.MX	↓ 16-20	\leftrightarrow
DSP	↓ 16-20	\leftrightarrow

RENESAS

	Lead Time (wk)	Price
MCUs	↓ 12-24	#



	Lead Time (wk)	Price
8 Bit	↔ 12-16	\downarrow
16 Bit	↔ 12-16	\downarrow
32 Bit	↔ 12-18	\downarrow



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Program. Logic







	Lead Time (wk)	Price
Program. Logic	↔ 3-15	\leftrightarrow



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Logic

No significant changes in pricing and lead time, and no adjustments are expected.

nexperia

	Lead Time (wk)	Price
Standard Logic	↔ 8-12	\leftrightarrow

onsemi

	Lead Time (wk)	Price
Standard Logic	↔ 8-20	\leftrightarrow

SGMICRO

	Lead Time (wk)		Price
Standard Logic	\leftrightarrow	14-16	\leftrightarrow

TOSHIBA

	Lead Time (wk)		Price
Standard Logic	\leftrightarrow	14-18	\leftrightarrow